

03-23-00

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Practitioner's Docket No. 65545-0040

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

03/22/00
jc658 U.S. PTO

Box Patent Application
Assistant Commissioner for Patents
Washington, D.C. 20231

jc564 U.S. PTO
09/532557
03/22/00

NEW APPLICATION TRANSMITTAL

Transmitted herewith for filing is the patent application of

Inventor(s): James M. Johnson; Robert P. Kinross; Francis J. Melly; Douglas A. Momyer

For (title): ELECTRONIC SOURCING SYSTEM

1. Type of Application

This transmittal is for a divisional application.

2. Benefit of Prior U.S. Applications (35 U.S.C. 119(e), 120, or 121)

The new application being transmitted claims the benefit of prior U.S. applications. Enclosed are ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATIONS CLAIMED.

CERTIFICATION UNDER 37 C.F.R. 1.10*

(Express Mail label number is **mandatory**.)

(Express Mail certification is **optional**.)

I hereby certify that this correspondence and the documents referred to as attached therein are being deposited with the United States Postal Service on this date March 22, 2000, in an envelope as "Express Mail Post Office to Addressee," mailing Label Number EL 429 912 407 US, addressed to the: Assistant Commissioner for Patents, Washington, D.C. 20231.

Jennifer S. Greer

(type or print name of person mailing paper)

Jennifer S. Greer
Signature of person mailing paper

WARNING: Certificate of mailing (first class) or facsimile transmission procedures of 37 C.F.R. 1.8 cannot be used to obtain a date of mailing or transmission for this correspondence.

***WARNING:** Each paper or fee filed by "Express Mail" **must** have the number of the "Express Mail" mailing label placed thereon prior to mailing. 37 C.F.R. 1.10(b).
"Since the filing of correspondence under § 1.10 without the Express Mail mailing label thereon is an oversight that can be avoided by the exercise of reasonable care, requests for waiver of this requirement will **not** be granted on petition." Notice of Oct. 24, 1996, 60 Fed. Reg. 56,439, at 56,442.

3. Papers Enclosed

A. Required for filing date under 37 C.F.R. 1.53(b) (Regular) or 37 C.F.R. 1.153 (Design) Application

49 Page(s) of Specification
32 Page(s) of Claims
5 Sheet(s) of Drawing(s)-Formal

B. Other Papers Enclosed

1 Page(s) of abstract

4. Additional Papers Enclosed

Preliminary Amendment

5. Declaration or Oath

Is not enclosed and will be forwarded at a later date.

6. Fee Calculation (37 C.F.R. 1.16)

Regular Application

CLAIMS AS FILED					
Claims	Number Filed	Basic Fee Allowance	Number Extra	Rate	Basic Fee 37 CFR 1.16(a) \$690.00
Total Claims (37 CFR 1.16(c))	1	- 20 =	0 x	\$18.00	\$0.00
Independent Claims (37 CFR 1.16(b))	1	- 3 =	0 x	\$78.00	\$0.00
Multiple Dependent Claim(s), if any (37 CFR 1.16(d))			+	\$260.00	\$0.00

Amendment canceling extra claims is enclosed.

Filing Fee Calculation	\$600.00
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7. Fee Payment Being Made at This Time

Enclosed

Filing Fee	\$690.00
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Total Fees Enclosed	\$690.00
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8. Method of Payment of Fees

Charge Account No. 18-0013 in the amount of \$690.00. A duplicate of this transmittal is attached.

9. Authorization to Charge Additional Fees

The Commissioner is hereby authorized to charge the following additional fees by this paper and during the entire pendency of this application to Account No. 18-0013.

37 C.F.R. 1.16(a), (f) or (g) (filing fees)

37 C.F.R. 1.16(b), (c) or (d) (presentation of extra claims)

37 C.F.R. 1.16(e) (surcharge for filing the basic filing fee and/or declaration on a date later than the filing date of the application)

37 C.F.R. 1.17(a)(1)-(5) (extension fees pursuant to § 1.136(a))

37 C.F.R. 1.17 (application processing fees)

10. Instructions as to Overpayment

Credit Account No. 18-0013.

**ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF
PRIOR U.S. APPLICATIONS CLAIMED**

11. Relate Back

Amend the specification by inserting, before the first line, the following sentence:

A. 35 U.S.C. § 119(e)

“This application claims the benefit of U.S. Application No. 09/234,366 filed on January 20, 1999 which is a continuation of U.S. Serial No. 08/288577 filed on August 10, 1994, and now U.S. Patent No. 6,023,683.”

12. Further Inventorship Statement Where Benefit of Prior Applications Claimed

- a. This application discloses and claims only subject matter disclosed in the prior application whose particulars are set out above and the inventors in this application are the same.

13. NOTIFICATION IN PARENT APPLICATION OF THIS FILING

A notification of the filing of this divisional is being filed in the parent application, from which this application claims priority under 35 U.S.C. § 120.



SIGNATURE OF PRACTITIONER

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R0079101

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Johnson et al.

Serial No.: To Be Assigned

Filed: Herewith

For: ELECTRONIC SOURCING SYSTEM

Box Patent Application
Assistant Commissioner for Patents
Washington D.C. 20231

PRELIMINARY AMENDMENT

Dear Sir:

Please amend the application as follows prior to examination on the merits.

IN THE CLAIMS

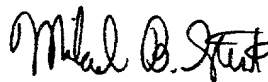
Please cancel claims 1-78 of the application.

Please add:

79. An electronic sourcing system comprising:
- a database containing data relating to items associated with at least two vendors maintained so that selected portions of the database may be searched separately;
 - means for searching for matching items in the selected portions of the database;
 - means for building a requisition that includes data relating to selected matching items;
 - means for processing the requisition to generate purchase orders for selected matching items.

Respectfully submitted,

By:



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Express Mail Label No. EL429912407US
Mailed: March 21, 2000

Express Label No. EL075501554US
Mailed January 20, 1999

Express Mailing Label
No. EG204717525US

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ELECTRONIC SOURCING SYSTEM

5 Background of the Invention

This invention relates to systems and methods for interfacing product information, such as is typically found in vendor catalogs that are provided to customers, and requisition/purchasing systems and
10 methods that may use the results of searches of product information.

There are a number of known requisition/
purchasing systems that manage and process requisitions and purchase orders. One such system is the Fisher
15 Scientific Requisition and Inventory Management System ("Fisher RIMS"), described in co-pending patent application Serial No. 08/042,168, filed April 2, 1993 and assigned to Fisher Scientific Company of Pittsburgh, Pennsylvania, the disclosure of which is
20 incorporated herein by reference. As its title suggests, Fisher RIMS can also manage inventory. In the Fisher RIMS system, requisition records are created from a real-time interaction between a host computer (generally a mainframe) and a local computer (generally
25 at a customer site), with each computer using data from its own respective database of inventory in conjunction with information entered by a customer service representative operating the local computer. By accessing its respective database, each computer can
30 build and transmit to the other computer communications blocks of data relating to a particular requisition of an item in inventory (or to the management of the inventory itself). The other computer can then use the received data to continue processing of the
35 requisition. Thus, requisition records are created from a real-time interaction between the host and local

computers, with each computer using data from its respective database in conjunction with information entered by a customer service representative operating the local computer.

5 Other requisition/purchasing systems can be grouped broadly into four classes. First, requisition management systems licensed to corporations purchasing for their own use include ORION software (from Medical Management Systems), ENTERPRISE software (from ESI),
10 and NOVA software (from Johnson & Johnson). Second, there exist systems provided by distributors for transmitting orders to them in proprietary formats. Such systems include QUICKLINK (from Abbott), ASAP system (from Baxter) and LIGHTNING system (from Fisher
15 Scientific). Third, software packages licensed by software developers to customers and/or suppliers enable the transmission of customer purchase orders as EDI purchase orders (in ANSI X.12 format). Examples of such systems include ON-CALL EDI (from TSI
20 International), EDI Express software (from General Electric Information Services) and GETRAN software (from Sterling Software). Fourth, comprehensive business management packages such as REAL WORLD software (from Real World Corporation of Concord, NH)
25 and ASK software (from The ASK Group) contain a purchasing module to create replenishment orders when inventoried items fall below restocking points. The same purchasing module can also be used to place spot orders for products keyed in by the customer's
30 purchasing personnel.

None of these known requisition/purchasing systems (including Fisher RIMS), however, provides a capability for a user readily to search for and locate information about the products that may be
35 requisitioned and ordered in connection with the

requisition/purchasing system. They also do not provide the capability for a user to search a database containing two or more vendor catalogs, and then to transfer information about the items selected as a
5 result of such searches into a requisition/purchasing system such as Fisher RIMS for building a requisition for the catalog items.

Computer systems that are capable of searching databases containing a product catalog of a
10 particular vendor, for example on CD-ROM, are also known. Such systems can search for user requested information about products and create orders which the user can save, print or, in some cases, facsimile directly to a vendor. The known computer systems for
15 searching vendor catalogs are limited in that only one such vendor catalog is accessible to a user at any given time. They are also limited in that they can only create an order within the particular vendor catalog database. They cannot source items to be
20 requisitioned from a database containing multiple catalogs or interact with a requisition/purchasing system (such as Fisher RIMS) to create a purchase order or orders including the items located from that sourcing operation.

25 Thus, it would be desirable to provide an electronic sourcing system that provides a means for transferring information between a requisition/purchasing system that may use the results of a search of product information and a means for searching large
30 volumes of product information such as would be included in a vendor product catalog or catalogs.

It would also be desirable to provide such an electronic sourcing system that is capable of searching a database containing at least two vendor product
35 catalogs for product information.

It would further be desirable to provide such an electronic sourcing system that is capable of searching a database of catalog items contain in at least two vendor product catalogs, selecting particular
5 items located, and transferring information about the items selected (for example, a catalog number and a vendor identifier, such as vendor name and/or vendor number) to a requisition/purchasing system for inclusion in a requisition generated by the system.

10 It would further be desirable to provide an electronic sourcing system that is capable of creating an order list including items located as the result of a catalog database search and transferring that order list of desired catalog items to a requisition/
15 purchasing system for inclusion of the catalog items as entries in a requisition generated by the system.

Summary of the Invention

In view of the foregoing, it is an object of this invention to provide an electronic sourcing method
20 and system that provides a user with the capability of searching a database containing data (including product/vendor identification, and other product information) relating to items available from at least two vendor product catalogs, and the capability of
25 transferring the product information for desired catalog items obtained as a result of the search to a requisition/purchasing system for use in generating a requisition including entries for the desired catalog items.

30 It is also an object of this invention to provide an electronic sourcing system that provides a means for bi-directionally transferring information between a requisition/purchasing system that may use the results of a search of such product information,

and a means for searching large volumes of product information such as would be included in a vendor product catalog.

It is a further object of this invention to
5 provide an electronic sourcing system capable of
creating an order list including desired catalog items
located as the result of such a database search, and
transferring that order list to a requisition/
purchasing system for generating a requisition
10 including entries for the desired catalog items.

In accordance with the invention, an
electronic sourcing system and method used by the
system are provided. The system includes a computer
that maintains a catalog database of data including
15 product information (such as product identification
information, and descriptive information) relating to
catalog items available from vendor product catalogs,
and a means for building (generating) a requisition
including at least one requisitioned item. Information
20 at least partially identifying an item desired to be
requisitioned is entered by a user, and utilized by a
means for searching the database for catalog items
matching that information and for selecting at least
one catalog item located as a result of the search.
25 Text describing the catalog items, and images of the
items, may be viewed. Data identifying selected
catalog items are communicated to the requisition
building means, which generates a requisition including
entries for items corresponding to the selected catalog
30 items. Additionally, the invention includes a means
for checking the availability in one or more inventory
locations of the corresponding desired catalog items,
and for generating one or more purchase orders for
desired items from inventory locations stocking the
35 items.

Brief Description of the Drawings

The above and other objects and advantages of the invention will be apparent from consideration of the following detailed description, taken in
5 conjunction with the accompanying drawings, in which like reference characters refer to like parts throughout, and in which:

FIG. 1A is a block diagram showing one exemplary embodiment of the overall system of the
10 present invention;

FIG. 1B is a block diagram showing another exemplary embodiment of the overall system of the present invention;

FIG. 1C is a block diagram showing a portion
15 of the embodiment of FIG. 1A in greater detail;

FIG. 2 is a block diagram showing the flow of control and interaction between the various programs and data screens of the programs used for requisition management and vendor catalog searching of the present
20 invention; and

FIG. 3 is a block diagram showing a portion of a system (Fisher RIMS) for requisition management, including the electronic sourcing system of the present invention.

25 Detailed Description Of The Invention

FIGS. 1A and 1B show preferred embodiments of the electronic sourcing system 5 of the present invention. As shown in FIG. 1A, a local computer 20, which is preferably located at or near a Customer site
30 and the site of Just-In-Time ("JIT") Inventory, is preferably used by an on-site Customer Service Representative ("CSR") dedicated to a Customer to assist that Customer in requisitioning items needed.

Local computer 20 includes conventional color monitor 22 and alphanumerical keyboard 24 including twelve function keys F1, F2, F12. Local computer 20 is also coupled to printer 26.

5 Local computer 20 is preferably a conventional microcomputer (such as a 386-, 486- or Pentium-class personal computer) capable of operating the required programs and of transmitting and receiving the required communications, running the OS/2 operating
10 system 32 and also running the CICS OS/2 application 34, both of which are available from IBM.

Electronic sourcing system 5 also includes a requisition/purchasing system 40, preferably but not necessarily the Fisher RIMS system, and a search
15 program 50 that is capable of searching through large volumes of information quickly and accurately. Preferably but not necessarily, the Technical Viewer 2 search program ("TV/2"), available from IBM, is used as search program 50. As shown in the embodiment of FIG.
20 1A, Fisher RIMS 40 and TV/2 search program 50 are run by local computer 20.

Fisher RIMS system 40 is comprised of numerous program modules, including several programs 44, which operate within CICS environment 34 of OS/2
25 operating system 32. Programs 44 include, among others, Requisition Management ("REQUI") program 44A, Inventory Sourcing program or programs 44B, Requisition Maintenance program 44C, Customer Variable program 44D, and Order Header program 44E, each of which will later
30 be described in greater detail. REQUI program 44A is most often the RIMS program 44 that interfaces with TV/2 search program 50.

Fisher RIMS system 40 also includes several Fisher RIMS databases 42. These databases 42
35 preferably include requisition databases 42A, inventory

databases 42B, and customer-specific databases 42C, each maintained within OS/2 operating system 32.

Local computer 20 also preferably runs Shell program 52, which operates under search program 50 and is used to customize search program 50 to generate Order Lists 48 (shown in FIG. 1C) with particular fields of formatted data about the items selected using search program 50. Local computer 20 is preferably capable of running both a RIMS program 44 and Shell program 52 at the same time (i.e., in a multi-tasking environment), but the user of local computer 20 usually sees only RIMS program 44 or Shell program 52 at one time in the foreground on monitor 22.

Local computer 20 is also provided with a catalog database 36 comprised preferably of at least two vendor product catalogs. The catalogs, and hence catalog database 36, preferably include such information as part number, price, catalog number, vendor name or I.D., and vendor catalog number, as well as textual information and images of or relating to the catalog products. The nature of the business that the Customer using electronic sourcing system 5 conducts will determine which product catalogs are made a part of catalog database 36.

A feature of the present invention is the ability to search multiple catalogs from different suppliers. For example, catalog database 36 can contain the catalog or catalogs published by a vendor Distributor, having Distributor's catalog numbers for all listed products and vendor manufacturer's part numbers for many of the listed products. Catalog database 36 can further contain catalogs published by some of the vendor manufacturers, listing the manufacturers' part numbers for certain products correspondingly listed in the Distributor's catalogs

and for certain products not listed in the Distributor's catalogs. Catalog database 36 can further contain catalogs published by outside suppliers, whether other manufacturers or other distributors, listing such vendor's products different from those in the Distributor's catalogs.

Where the Fisher RIMS system is in use with electronic sourcing system 5, a host computer 10 located at a Distributor site is also provided, as shown in FIG. 1A. Host computer 10 controls all inventory, pricing and requisitioning operations of the Distributor's regularly stocked items using host pricing and inventory databases 11. Host pricing and inventory databases 11 may include such information as: descriptions of the items and the quantities thereof available at a particular Distributor warehouse and at other Distributor warehouses; item records for each Product regularly sold by the Distributor; discount records by Customer; and cross-references from the Distributor's catalog number to its corresponding vendor's part (catalog) number and to similar corresponding catalog numbers of other vendors (suppliers or distributors) for the same Product.

Host computer 10 and local computer 20 are preferably linked point-to-point or in a network employing the formats and protocols of IBM's System Network Architecture ("SNA"). Host computer 10 can be substantially any mainframe or minicomputer capable of running the desired programs and conducting the required communications. Preferably, host computer 10 is a mainframe computer, such as an IBM Model 3090, running the MVS operating system, the MVS-CICS application and a Virtual Telecommunication Access Method communications network.

As shown in FIGS. 1C and 2, interface 60 is also a part of electronic sourcing interface system 5. Interface 60 communicates shared data between requisition/purchasing system 40 and search program 50. Interface 60 is preferably based upon the dynamic data exchange ("DDE") protocol provided by OS/2 operating system 32. As shown in FIG. 2, interface 60 preferably includes three linking programs to interface requisition/purchasing system 40 and search program 50: ESRC program 70, ESCP program 80 and DDE LINK 90.

A typical data exchange may begin with requisition/purchasing system 40 (which, in the illustrated embodiment, is the Fisher RIMS system) requesting information from catalog database 36 via search program 50. Once a search by search program 50 has been completed, the selected information will be communicated to requisition/purchasing system 40 via interface 60.

Alternatively, if the search of catalog database 36 is initiated from search program 50, the information selected from the search is returned to requisition/procurement system 40 via interface 60.

The start up of electronic sourcing system 5 (FIG. 1A) may be user-initiated or automatically started when the operating system, preferably OS/2 system 32, is brought up on local computer 20. An application-name string 61 must be identified to label interface 60. As shown in FIG. 1C, electronic sourcing system 5 by convention will use "TV2V123," "TV2V124," "TV2V125," etc. as application names 61 supporting the user's requesting service.

Preferably, application names 61 correspond to virtual terminal sessions that exist in the CICS system 34 of requisition/purchasing system 40. There will be a one-to-one correspondence between

applications started (such as Shell 52) and CICS
virtual terminals in use at a location of requisition/
procurement system 40 (such as REQI program 44A).
Local computer 20 will query OS/2 operating system 32
5 to determine the next application-name string 61 to
create at start-up. The application-name strings 61
will be created in sequence with V123 being created
first, V124 created second, etc. Each application will
create only one application name-string 61 to support
10 its user in the CICS environment 34.

If the Fisher RIMS system has been selected
as requisition/purchasing system 40, and the TV/2
search program has been selected as search program 50,
CICS OS/2 applications 34 must share a workstation with
15 a TV/2 search program 50.

The data passed by interface 60 preferably
comprise all or a subset of the following twelve
fields: vendor name, vendor number, vendor part
(catalog) number, product description, bid price, list
20 price, keyword, page number, quantity, unit, catalog
text, and catalog images. Because of the amount of
data for catalog images present in database 36 and
viewed on monitor 22, these data are usually not passed
via interface 60. Any of the above-listed fields may
25 be filled by requisition/purchasing system 40 prior to
requesting a search of catalog database 36 by search
program 50. However, requisition/purchasing system 40
is not required to pass any data to search program 50.
If a field is not passed, that field will be filled
30 with spaces. The fields that are filled with data will
assist search program 50 in executing its first search
against a specific catalog contained in catalog
database 36.

A search priority exists when more than one
35 field is provided by requisition/purchasing system 40.

The priority is as follows: (1) part (catalog) number; (2) keyword; and (3) page number. The search will start with priority (1) and proceed through priority (3) in sequence until a search produces products matching the search criteria. At that time, the search will return the matching product information to requisition/purchasing system 40 and stop at the highest priority resulting in a match.

The operation of electronic sourcing system 5 of the present invention will now be more particularly described in the context of FIGS. 1A, 1C, 2 and 3. In FIGS. 2 and 3, the rectangles represent data screens as well as programs associated with those data screens. The rounded rectangles represent programs not associated with data screens such that, while these programs are running, the prior data screen may remain visible without, necessarily, being operational for the input of data. The programs associated with the data screens enable the user of local computer 20 to display and modify the contents of various tables associated with particular data screens. The following description illustrates the use of the Fisher RIMS system as requisition/purchasing system 40, and the TV/2 search program as search program 50. However, it will be understood that the present invention is not limited to such system or program.

Preferably, a user will start the electronic sourcing system 5 from Fisher RIMS system 40. Requisitioning on Fisher RIMS system 40 in context of the electronic sourcing system 5 of the present invention is illustrated in pertinent part in FIG. 3 (and is fully described in Application Serial No. 08/042,168). As data (e.g., Account Number, Requisition Number and Stock Numbers) associated with a single requisition are entered through the various data

screens on local computer 20, that computer creates a set of Requisition Tables (including a Requisition Item Table 46, shown in FIG. 1C) for that particular requisition. The Requisition Tables are stored in
5 Requisition databases 42A (shown in FIG. 1A), and can be accessed by local computer 20 using the Requisition Number to find the desired table.

The first step in creating a requisition in Fisher RIMS system 40 involves entry by the user of
10 information in the Order Header program 44D (shown in FIG. 1A), which has an associated Order Header data screen 100 (FIG. 3). A sample of an actual Order Header data screen 100 is set forth in Appendix I. The user enters an Account Number, which generally causes
15 the correct name and address associated with that Account Number to be entered into the appropriate fields of Order Header data screen 100. The user must also enter a Requisition Number in the appropriate field of the Order Header screen 100. Various
20 additional information may also be entered.

At the bottom of Order Header data screen 100 are several fields that describe the function of various function keys. Function keys F6, F9, and F10 all cause the system to jump to a new RIMS program 44
25 or data screen in Fisher RIMS system 40. For example, pressing the F9 key causes the system to jump to RIMS Customer Variable program 44E (FIG. 1A) and its associated Customer Variable Header data screen 104 (FIG. 3). Customer Variable Header program 44E with
30 its associated Customer Variable Header data screen 104 allows the user to enter and edit information that the particular customer desires to be associated with the requisition due to requirements of the customer's internal accounting system or other systems. Pressing

the F10 key will cause the system to enter the Inventory Sourcing program or programs 44B.

Pressing the F6 function key from the Order Header data screen causes Fisher RIMS system 40 to jump
5 to REQUI program 44A (FIG. 1A). The screen associated with REQUI program 44A is Requisition Management data screen 110 (FIG. 3) illustrated in Appendix II. Within REQUI program 44A and its associated Requisition Management data screen 110, Requisition Item Table 46
10 (shown in FIG. 1C) is a graphical representation of a database table in which certain fields are completed on a list of items that are to be listed, sourced and ordered. Representative Requisition Management data screens 110 showing a Requisition on Requisition Item
15 Table 46 are set forth in Appendices II, VIII and IX. It should be appreciated that data about each item is stored in Requisition Item Table 46, some of which is displayed on the screens shown in Appendices II, VIII and IX. The data stored can additionally include
20 customer variable data. That is, the fields on Requisition Item Table 46 can be expanded to include specific item details used by a particular customer, especially when reports from requisition databases are transferred to the customer's host computer (not
25 shown). The field structure for these data is maintained in customer-specific databases 42C.

The entire process of listing, sourcing and ordering products using Fisher RIMS system 40 can be completed without any reference to a search program 50.
30 As described herein, however, limited fields on specific items can be transmitted from Requisition Item Table 46 to search program 50, and more completed fields of the same or different items can be received from the search program 50 into a Requisition Item
35 Table 46.

At the bottom of Requisition Management data screen 110 (FIG. 3), and Appendices II, VIII and IX) are several fields which describe the function of various function keys (F1, F2, etc.). The user uses
5 REQI program 44A and its associated Requisition Management data screen 110 to enter the catalog or part numbers and quantities of the various items being requisitioned.

The Account Number and Requisition Number
10 are automatically passed to REQI program 44A and its associated Requisition Management data screen 110, and displayed at the top of the Requisition Management data screen 110 in the relevant fields. For example, in the exemplary Requisition Management data screen 110 shown
15 in Appendix II, the number 218848 has been entered in the Account Number field, and the notation "TEST NEW ONE" has been entered in the Requisition Number field.

The user can next enter desired items and quantities for the requisition. Each desired item may
20 be identified by entering its distributor catalog or part number, if known, in the field below the STOCK NBR label on the appropriate line in Requisition Item Table 46 shown on Requisition management data screen 110. In the sample Requisition Management data screen 110 shown
25 in Appendix II, the part number 13246818F has been entered in the STOCK NBR field of Line 001. Once the user has entered such information at least partially describing a desired item on Requisition Management data screen 110, he or she may wish to initiate a
30 search of catalog database 36 to find all the part numbers contained in catalog database 36 that match the part number entered or other information on Requisition Management screen 110. If so, the user enters the letter "S" (for "Select") on the line number of the
35 item that he or she wishes to search in catalog

database 36. The letter "S" has been entered to the left of line 001 on the sample Requisition Management data screen 110 shown in Appendix II. Any number of items, or no items, listed on Requisition Management data screen 110 may be marked with "S."

A user may not always have information relating to the catalog or part number for the particular items that are to be requisitioned using Fisher RIMS system 40. Or, the user may have relevant information about an item from a particular vendor but may wish to locate information about the same or a similar product available from other vendors. Or, the user may simply know the name of the item that he or she wishes to requisition. In any of these cases, the user alternatively or additionally could enter text at least partially describing the product to be requisitioned in the "DESC" field of Requisition Management data screen 110 (e.g., Appendix II). Then, the user would initiate the electronic sourcing system 5 of the present invention to search the vendor product catalogs contained in catalog database 36.

Alternatively, the user could initiate search program 5 of electronic sourcing system 5 without having first entered information in RIMS system 40 about the product to be requisitioned.

Once the user has built or partially built Requisition Item Table 46 by filling the line numbers (entries) on Requisition Management data screen 110 and selecting those lines to be searched, he or she is now ready to initiate electronic sourcing system 5. Pressing the F11 function key, which is labelled "Catalog," from Requisition Management screen 110 accesses electronic sourcing system 5.

Referring now to FIG. 2, after the user presses the F11 key on Requisition Management data

screen 110 of Fisher RIMS system 40, Fisher RIMS system 40 will pass program control via XCTL 74 to ESRC program 70. XCTL 74 is a protocol within CICS application 34 that directs the execution of a program, as would readily be understood by one of ordinary skill in the art. As control is passed from REQI program 44A to ESRC program 70, ESRC-Comm-AREA data structure 76 is passed. ESRC-Comm-AREA is a layout of storage area in local computer 20 created by REQI program 44A to pass data to ESRC program 70, as would readily be understood by one of ordinary skill in the art. ESRC program 70 will then LINK 82 to ESCP program 80 with ESCP-Comm-AREA 84. LINK 82 is a protocol within CICS application 32 that directs the execution of a program, as would readily be understood by one of ordinary skill in the art. Data at least partially describing one item desired to be requisitioned is passed to ESCP program 80 via LINK 82. Thus, if there are five items to be passed to ESCP program 80, there will be five LINKS 82 made. If no items are to be passed to ESCP program 80, only one LINK 82 is made to ESCP program 80. ESCP program 80 can return up to twenty items per LINK 82; in other words, for each item desired to be requisitioned up to twenty desired catalog items contained in catalog database 36 may be sent to REQI program 44A and its associated Requisition Management data screen 110 of Fisher RIMS system 40. If a user chooses to terminate the sourcing process, ESRC program 70 would return to REQI program 44A and its associated Requisition Management data screen 110 without processing any of the records.

ESCP program 80 links with Shell 52 and TV/2 search program 50 via DDE LINK 90. Shell 52 and TV/2 search program 50 search in catalog database 36 for the item or items desired to be requisitioned that has or

have been passed from ESRC program 70 to ESCP program 80. Catalog database 36 contains the following fields: vendor name, vendor number, vendor part (catalog) number, product description, list price, page number, quantity, unit, catalog text, and catalog images. Shell 52 and TV/2 search program 50 may, if desired, search the keyword field or any other field shown in Appendix VII. However, not all fields may appear on the monitor 22 of local computer 20, although they are stored in memory.

After the user has pressed the F11 key from Requisition Management data screen 110 and control has been passed from REQI program 44A to Shell 52 and TV/2 search program 50, monitor 22 of local computer 20 will show a footer bar representative of Shell 52 at all times that the user is in the TV/2 search program 50. The footer bar, which also includes appropriate icons, is used to make choices within Shell 52. A sample of the footer bar (without the icons) representing Shell 52 is shown at the base of Appendices III-VII. In the screens of Appendices III-VI, this footer bar is active to select functions. In the screen of Appendix VII, this footer bar is in the background and another footer bar is used to select functions.

If the user has marked an item on Requisition Management data screen 110 with the designation "S," the entered data at least partially describing that item will be sent to Shell 52 and TV/2 search program 50A in the manner described above. TV/2 search program 50 will search catalog database 36 for all items that match the search field sent over from REQI program 44A and Requisition Management data screen 110. When a search is performed in Shell 52 and search program 50, a Hit List 47 is produced, as indicated in FIG. 1C. The user would see on monitor 22 of local computer 20 a

Hit List 47 screen representing limited data about all matching catalog items that were located in catalog database 36 as a result of the search. A sample Hit List 47 produced from a search initiated when the entry
5 "OVENS" is received as the description or keyword by search program 50 from Requisition Item Table 46 is shown in Appendix III. Similar Hit Lists 47 are produced when various searches are performed from the Search Input screen shown in Appendix VII. When a Hit
10 List 47 is depicted on monitor 22, the underlying catalog text and pictures (in either partial or complete form) are typically collected in a memory location for rapid viewing, printing or other use.

When multiple catalogs are present in catalog
15 database 36, search program 50 contains a function associated with the catalog symbol of the footer bar and screen window (not shown) for selecting catalogs to be searched. For example, the following choices might be available:

- 20 1. Fisher General Catalog 93-94;
 2. Fairmont Supplies Catalog;
 3. NIST Standards Catalog; and
 4. Promega Biological Research Products Catalog.

Fairmont and NIST catalogs list products not
25 in the Fisher General Catalog, but many of the products listed in the Promega catalog are also listed in the Fisher General Catalog (identified by corresponding Fisher catalog numbers). If searching for a molecular biology product, the user would select the Fisher and
30 Promega catalogs. TV/2 search program 50 would then concatenate those two catalogs to perform a keyword, catalog number or other subject search and generate a Hit List of pages (panels) from both catalogs where the searched-for items were found. Similarly, the user
35 might select the Fisher and NIST catalogs when searching for quality control standards or might select

the Fisher and Fairmont catalogs when searching for supplies.

If the search is initiated from requisition/purchasing program 40, for example from the Requisition Management data screen 110 of the Fisher RIMS system, then the catalogs searched can be determined by the information provided. If, for example, Promega is indicated as the desired requisition item vendor, interface 60 would direct TV/2 search program 50 to search the Fisher and Fairmont catalogs. If no catalog delimiting information is entered for the item desired to be requisitioned, interface 60 would be set up to search only the Fisher catalog or, alternatively, to search all catalogs in catalog database 36.

Once Hit List 47 has been created by TV/2 search program 50, the user can view it and select particular ones of the located catalog items for Order List 48 that is being created in Shell 52, as shown in FIG. 1C. For example, a search for "Eco RI," a restriction enzyme, may have uncovered five entries in the Promega catalog (identified by Promega catalog numbers R6011, R6012, R6013, R6015 and R401) and five entries in the Fisher catalog (identified by Fisher catalog numbers PRR6011, PRR6012, PRR6013, PRR6015 and PRR4014). If the user selected PRR6012 from the Fisher catalog, Fisher catalog number PRR6012 would be added as an entry to the Items Selected screen, with VN00000001 (identifying the vendor as distributor Fisher) accompanying it in the Order List 48. If the user instead selected the item identified by catalog number R6012 from the Promega catalog, then Promega catalog number R6012 would be added as an entry to the Items Selected screen, with VN00005860 (identifying the vendor as Promega) accompanying it in the Order List. In either case, the information transmitted to REQI

program 44A of Fisher RIMS system 40 would also include description, list price and other information taken from the catalog database from which the selection was made. When the resultant requisition is sourced, however (as described below), Distributor's mainframe host computer 10 would recognize the entry for the item from vendor Promega's catalog (R6012, 00005860) as corresponding to that same item available from Fisher's catalog (PRR6012, 00000001). The system thus would transmit back the Customer's contract price and availability for corresponding item PRR6012 as a type 03 (regular Distributor) product available from one of distributor's inventory locations. A purchase order then would be generated for this corresponding Distributor item as further described below.

By contrast, an item selected from the Fairmont catalog would be transferred to Fisher RIMS system 40 with the vendor number for Fairmont, and would be recognized during inventory sourcing as either a type 07 product (that Distributor orders from Fairmont) or as a type 05 item (that Customer orders from Fairmont as an Administrative Purchase). In either of these two cases, a purchase order would be generated for an item, corresponding to a desired catalog item, that is identified by the same Fairmont catalog number that was requisitioned.

After the desired item has been selected from the Hit List 47 by double clicking on that item TV/2 search program 50 can be used to bring up for viewing on monitor 22, or printing on printer 26, images and text from the catalog page on which the item selected is located. For example, as shown in Appendix III, page 1106 of the Fisher catalog has been selected. If the user double clicks on highlighted page 1106, the text shown in Appendix IV (and related images, not

shown) would appear on monitor 22. On the sample screen shown in Appendix IV, the item that appears on page 1106 of the Fisher catalog relates to Fisher Isotemp 800 Series Programmable Ovens. Conventional scroll bars appearing on the screen (not shown in Appendix IV) enable the user to scroll through additional catalog information (text and/or images) not yet displayed on the screen. An example of such additional textual information is depicted on the screen shown in Appendix V.

On the screen of Appendix V, the vendor distributor's catalog number ("Cat. No.") 13-246-818F is highlighted. The catalog number of an item normally appears in blue in a screen such as Appendix V. This blue lettering is used for catalog numbers, trademarks, footnotes and other entries for which database 36 contains additional information or cross-references (called hyperlinks). When a search is conducted and the catalog segments of the resultant hit list are reviewed, the test corresponding to the search parameter is highlighted in red. Thus, in Appendix V, catalog number 13-246-818F (identified in the search) appears in red, while catalog number 13-246-838F and the trademark Isotemp each appear in blue. A word, vendor part number or catalog number located by the search will appear red, even if that word or number did not have an associated hyperlink (and thus is not normally blue).

When in search program 50, particular items selected can be added to an Order List 48 pending in Shell 52 and search program 50. When the Ordering portion of catalog text is viewed (as in Appendix V), particular items can be selected so as to be added to the Order List 48 by double clicking on the highlighted catalog number (even if a different field was also

highlighted as a result of a search of catalog database 36). The item is then added to an Order List 48 that is created in Shell 52 via a hypertext link. The items that are sent to the Order List 48 are collected and shown on the Items Selected screen of Shell 52. An example of an Items Selected screen of Shell 52 is shown in Appendix VI. The Items Selected screen depicts certain fields of Order List 48 that can be viewed and edited within search program 50. For example, Shell 52 permits the user via a pop-up window (not shown) to select units, e.g. pack or case, and quantity to be ordered, e.g. two packs. Alternatively, the data in these fields can default to one of the smallest unit and the units can be changed when the order is reviewed in REQI program 44A. Additional fields on the same items are also present in memory at this stage. Upon clicking on "Order" when the Items Selected screen (Appendix VI) is viewed, many or all of these fields on the items in the Order List are transmitted back to REQI program 44A (via the programs of interface 60 shown in FIG. 2) to be added to the pending Requisition Item Table 46. The sample Items Selected screen shown in Appendix VI includes the Isotemp Oven with catalog number 1324818F that was located as a result of the search for all items in catalog database 36 that match the part number 13246818F that was entered in the STOCK NBR field of REQI program 44A and its associated Requisition Management data screen 110 of Fisher RIMS system 40.

The following fields are transferred to Order List 48 created in TV/2 search program 50: Vendor name, vendor number, vendor part (catalog) number, product description, list price, page number, quantity, unit and catalog text. However, not all of these fields are viewed on the Items Selected screen.

If more than one item on Requisition Management data screen 110 had been marked with an "S," the process described above is repeated.

If the user desires to do additional
5 searching in catalog database 36 that is not connected to catalog or other items that have been listed on Requisition Management data screen 110 of Fisher RIMS system 40, he or she can click the box on footer bar of Shell 52 that is labelled "Search." Then, a Search
10 screen comes up on monitor 22 of local computer 20. An exemplary Search screen is shown in Appendix VII. In this screen, the usual footer bar is visible in the background, but is not active.

Using the Search screen, a user can search
15 catalog database 36 by page, text description, part number (where the user has the further option to search by Fisher part number, for example if Fisher is to be the desired vendor), Vendor part number, vendor name (for vendors other than Fisher), or bulletin. Stock
20 numbers specific to the customer can also be present in catalog database 36 and searched using the screen of Appendix VII. "Bulletin" refers to an additional vendor publication with detailed product information that may not be included in a vendor catalog.
25 Searching for information contained in bulletins may be done by bulletin number, but only if bulletins have been made a part of catalog database 36. For purposes of this disclosure, bulletins when included in a catalog database are considered a type of catalog.

30 After the user has entered the field to be searched on the Search Screen, the user clicks on the "SEARCH" box near the bottom of the Search Screen. A Hit List 47 indicating all items from catalog database 36 that match the search field that was entered on the
35 Search Screen then is generated. Then, in a manner

similar to that described previously, the user can scroll through the Hit List 47 and double click on the catalog page or panel desired. The user may then also view the detailed information located on the catalog
5 page that was selected from the Hit List 47. During the search, the user may also add additional items to the Order List 48 being built in Shell 52 if desired, whether those additional items had been selected from the Hit List 47 or not.

10 The Order List that the user has built in Shell 52 is maintained on the Items Selected screen, shown in Appendix VI. From the Items Selected screen, the user can cancel the order by clicking on the "Cancel" box at the bottom of the screen, delete an
15 item from the Order List 48 by moving the pointer bar to the item to be deleted and then clicking on the "Delete" box at the bottom of the screen, or delete all items by clicking on the "Delete All" box. The user can also view catalog text and images for a particular
20 item by clicking on the "Description" box.

Once the user has completely built the Order List 48 within Shell 52 and TV/2 search program 50, he or she can transmit it to Fisher RIMS system 40. This is accomplished by clicking on the "Order" box at the
25 bottom of the Items Selected screen to communicate the completed Order List 48 to Fisher RIMS system 40.

The user may have selected no items, one item or several items from the catalogs contained in catalog database 36 by using TV/2 search program 50. If no
30 items have been selected, the original items that were entered on Requisition Item Table 46 of Requisition Management data screen 110 will remain on that screen and will continue to be processed by Fisher RIMS system 40. If one or several desired catalog items were
35 selected in TV/2 search program 50, the first item

selected will replace the original item on Requisition Item Table 46 of Requisition Management data screen 110. Additional items that were selected from the search that was performed in TV/2 search program 50 will be added to Requisition Item Table 46 of Requisition Management data screen 110.

Interface programs ESCP 80 and ESRC 70 (FIG. 2) are used to send data to REQI program 44A (FIG. 1A) and its associated Requisition Management data screen 110 (FIG. 2) about the items that were selected from the search performed by TV/2 search program 50. To the user, it appears that all the items selected from the search are sent over to Fisher RIMS system 40 at the same time. However, ESCP program 80 receives multiple items from TV/2 search program 50, and then sends one item at a time to ESRC program 70. ESRC program 70 then waits until all items have been passed to it before sending data about the items to REQI program 44A and its associated Requisition Management screen 110 of Fisher RIMS system 40. The information transmitted to Requisition Management screen 110 from the Order List built in TV/2 search program 50 and sent through ESCP program 80 and ESRC program 70 includes vendor name, vendor number, vendor part (catalog) number, product description, list price, page number, quantity, unit and catalog text. However, not all of the above-listed fields may be displayed on screen at all times. ESRC program 70 passes control back to Fisher RIMS system 40 via XCTL 78. The requisition number, customer identification and release number (or other data identifying the requisition) will be passed in MENU-Comm-AREA 56 to confirm that the returned data are associated with the proper requisition. MENU-Comm-AREA 56 is a layout of storage area within local

computer 20, as one of ordinary skill in the art would readily understand.

As previously indicated, multiple LINKS 82 may have been created between program ESRC 70 and
5 program ESCP 80 if multiple lines were selected (with the "S" symbol) in Requisition Management data screen 110. After completing the first search, and any additional searches initiated with the footer bar, an order list is created and returned to Requisition Item
10 Data Table 46 associated with Requisition Management data screen 110. At this point, the next item is sent from a LINK 82 through program ESCP 80 and DDE LINK 90 to the TV/2 program 50, and a hit list resulting from the corresponding search is displayed on monitor 22.
15 The process of searching, displaying, selecting and ordering is repeated until all of items stored by LINKS 82 have been sent to TV/2 program 50 and searched. At the end of each of these searches, an order list may be created and returned to Requisition Item Data Table 46
20 or cancelled. Once the last item is completed, ESRC program 70 passes control via XCTL 78, and a Requisition Management screen 110 is displayed, reflecting all of the additions and changes that have been made to the Requisition Item Data Table 46
25 associated with that requisition.

A limit is normally placed on the number of items of an order that may be returned to the Requisition Item Data Table 46. For example, if the maximum size in Requisition Item Data Table 46 is set
30 at 200 lines, one could create a limit on the size of each order list at 20, 50, 100 or even 200. A corresponding limit can be placed on the number of LINKS 82 that can be established concurrently from the same requisition. Setting a limit of five LINKS 82 and
35 forty items per order list would be one way of avoiding

situations in which a Requisition Item Data Table 46 reaches its limit (e.g., 200 lines) before all of the searches (five) have been completed and order lists (five of forty items each) have been returned.

5 At this point in the use of Fisher RIMS system 40, as many entries (lines) of Requisition Management data screen 110 have been built up (some through use of electronic sourcing system 5) as are necessary to complete the requisition. A sample of
10 such a Requisition Management data screen 110, in which four lines have been entered identifying desired items to be requisitioned (including catalog items located as a result of a catalogs search), is shown in Appendix VIII. The next step is that of inventory sourcing
15 using RIMS inventory sourcing program or programs 44B in Fisher RIMS system 40, as shown in FIG. 3. Inventory sourcing is the process of determining what inventory will be used to fill the requisition. Pricing is also performed in this step when it is
20 called for. Inventory sourcing in Fisher RIMS system 40 is performed on both local computer 20 and host computer 10.

 Within Fisher RIMS system 40, a Requisition Item Table 46, as shown in Appendix VIII (similar to
25 that shown in Appendix II, but including more items), can be inventory sourced by pressing the key F6 from REQI program 44A represented by Requisition Management data screen 110 shown in Appendix VIII (and in Appendix II). Since inventory records on JIT items (type 01 and
30 06) are maintained in inventory database 42B, lines 002 and 004 in Appendix VIII show the availability of these items in inventory (49 items available for line 002, and 0 items available for line 004). After the F6 key has been pressed, host computer 10 searches its host
35 pricing and inventory databases for availability of the

various items listed on Requisition Management data screen 110 in different inventory locations (e.g., different warehouses) as described in further detail, below.

5 After such inventory sourcing, and assuming that no errors occurred during sourcing (as indicated by decision step 116 in FIG. 3), the contract price, source (inventory) location and available quantity or other fields are communicated back to computer 20 by
10 host computer 10, and entered and displayed in the Requisition Management Screen. This can best be seen by comparing lines 001 and 003 of Appendix VIII to Appendix IX, especially as to "QTY AVAIL" (quantity available), "LOC" (inventory location) and price. As
15 Appendix IX indicates, an inventory-sourced Requisition Item Table 46 typically contains the same items, but with more completed fields (including price, product type and inventory location). Moreover, as discussed above, an entry in an inventory-sourced Requisition
20 Management screen may indicate for a requisitioned item a vendor and vendor catalog number that has been changed, from what was obtained from a catalog search, to a corresponding vendor and vendor catalog number for that item from another source (e.g., Fisher -- which
25 has its own catalog number for that manufacturer's item that Fisher distributes).

For example, as shown in Appendix IX, product type "01" for the item on line 002 indicates that the requested requisition item is available as Distributor-
30 owned inventory in the JIT inventory that the vendor/distributor maintains near local computer 20, either for the particular Customer or for a group of customers. Product type "06" for the item on line 004 indicates that this item is available for the
35 requisitioner employed by the Customer from inventory

owned by Customer's purchasing department but managed by local computer 20. Product type "03" for the items on lines 001 and 003 indicates that these are regular Distributor items that the communication between

- 5 Distributor's host computer 10 and local computer 20 determined were available in sufficient quantity at one or another of Distributor's general warehouses designated "DEL" and "EDC" in the location ("LOC") field. Product type "05" (not shown in Appendix IX)
- 10 indicates that a requisitioned item is to be purchased by Customer directly from an outside supplier, using an Administrative Purchase Order that local computer 20 creates and prints (or transmits) for Customer.

- The inventory sourcing process described
- 15 above also determines the net prices shown in Appendix IX for each item. Type 01 and type 03 items are priced by Distributor's host computer 10 searching host databases 11, which contain various formulae and tables of Distributor's pricing agreement with the
- 20 Customer. Host computer 10 also prices any type 04 or type 07 item, if present. These prices were transmitted to local computer 20 along with the location and availability information for the type 01 items. Prices for type 05 and 06 items are maintained
- 25 in the local computer's 20 own databases 42B and 42C.

- From Requisition Maintenance data screen 120, the CSR can accept all lines of the requisition -- if all lines show the status "S" for sourced in the "STAT" field of Requisition Maintenance data screen 120 -- by
- 30 pressing the F6 function key. If item errors are found at step 116 in the data transmitted back to local computer 20 from host computer 10 during the sourcing process, then those particular items for which error was found will be returned and displayed by local
- 35 computer 20 in Requisition Management data screen 110.

Once a requisition has been inventory sourced and accepted by the CSR, it can be converted to one or more purchase orders, as represented by step 114 in FIG. 3. For example, the requisition represented by
5 the Requisition Item Table 46 of Appendix IX, if accepted without further revision by pressing function key F6 ("ACCEPT"), would result in the generation of the following three purchase orders:

- 10 A. Line 002 would be ordered from on-site distributor-owned inventory;
- B. Line 004 would be ordered from on-site customer-owned inventory (a transfer internal to the customer); and
- 15 C. Lines 001 and 003 would be ordered, respectively, from Distributor's "DEL" and "EDC" warehouses.

Of these three purchase orders, Orders A (type "01") and C (type "03") are shared between host computer 10 and local computer 20 (as shown in FIG. 3).
20 Upon execution of Order A, the inventory records on both computers for Distributor-owned JIT inventory are adjusted synchronously. A purchase order is generated by host computer 10 immediately thereafter. Order B (type "06") is executed and stored only on local
25 computer 20. Upon execution of Order B, the inventory record on local computer 20 is adjusted (the host computer contains no records on Customer-owned JIT inventory or on items ordered by Administrative Purchases). For Administrative Purchases (type 05
30 items), a purchase order is printed, and mailed or faxed, locally by computer 20 as indicated at step 118 in FIG. 3, or via host computer 10 via EDI (if EDI was selected in the Header of Appendix I and an EDI transfer arrangement existed with vendor).

It is an important feature of the present invention that a requisition may be filled by searching and selecting from a catalog database of items, inventory sourced, and the resulting requisition then
5 divided into one or more purchase orders. This contrasts with known prior art CD-ROM catalog systems in which only a single purchase order to a single supplier is built without reference to inventory records, and in which the information used to create
10 the purchase order is limited to that contained in the product catalog of a single vendor.

Electronic sourcing system 5 also contains the capability to log messages returned from inventory sourcing program or programs 44B of Fisher RIMS system
15 40. Messages will be logged for any of the following reasons: (1) part number changes for line sent to ESCP program 80; (2) list price from inventory sourcing program 44B differs from list price returned from ESCP program 80; (3) vendor name from inventory sourcing
20 program 44B differs from vendor name returned from ESCP program 80; (4) on a "master or blanket" order, in which local computer 20 tracks the amount of purchases against a blanket or cumulative sum available and/or in which there is limited access to products or limited
25 access to certain users, the part has already been entered on another line; and (5) the maximum number of line items has been reached.

Referring again to FIG. 2, a user is able to view the messages returned by pressing the ALT F11
30 function keys in REQI program 44A and its associated Requisition Management screen 110 in Fisher RIMS system 40. After the ALT F11 keys have been pressed, REQI program 44A will link to ESMV program 112 via XCTL link 111 for displaying the message log created. ESMV
35 program 112 is a function of Fisher RIMS system 40.

ESMV program 112 allows the user to page through the messages created and then to return to Requisition Management screen 110. A sample ESV message screen 81 associated with ESV program 112 is shown in

5 Appendix X.

10 The first two messages of the message screen of Appendix X indicate that a part number for line 001, identified as part number 53610, was successfully added in substitution for a prior part originally entered as
15 part number S100-06 (from the Fisher Scientific catalog). These messages were generated because the originally entered part (S100-06) did not exist in the Fisher catalog, but its corresponding part number S100-06 (that was located by another search in another
20 catalog) did exist in that other catalog. The next message indicates that the vendor for part number 53610 was changed in line 001 from "VN00000001" -- meaning that the originally requested vendor (Fisher) was changed. The next two messages indicate that two other
part numbers (53620 and 53650) were successfully added as lines 002 and 003.

25 In the previous description, an exemplary embodiment has been described in which a Distributor CSR operates Fisher RIMS requisition/purchasing system 40 and IBM TV/2 search program 50 as part of a Just-In-Time activity for a particular customer, Customer. Electronic sourcing system 5 of the present invention may also be used, however, in other requisition and purchasing environments.

30 In some embodiments, a Customer end user or a Customer purchasing employee operating REQI program 44A of Fisher RIMS system 40 may also operate TV/2 search program 50. Operating either from a terminal connected to local computer 20, or from a separate local computer
35 networked with the CSR's local computer 20, such a

Customer end user can select requisitioned items for inclusion in Requisition Item Table 46 by keystrokes viewing that screen and by searches in TV/2 search program 50 which are transmitted to the Requisition Item Table 46 via interface 60, as described above. Depending upon his or her authorization level and access code to Fisher RIMS system 40, the Customer purchasing employee may be able to source the final requisition and/or accept the sourced requisition, as shown in Appendix IX. If, however, the sourced requisition was split into more purchase orders than the Customer purchasing employee might prefer, the intervention of the Distributor CSR could be invoked to revise and re-source the requisition (causing, for example, certain items originally sourced as type 01 products to be sourced for this order as corresponding type 03 products from a common Distributor warehouse with other type 03 products on the requisition). The Customer end user may have authority only to build the Requisition Item Table, but then calls the Distributor CSR or Customer purchasing employee to source and accept the requisition.

As shown in FIG. 1B, the present invention also has application to Distributor's regional customer service locations where a large number of CSRs may be placing orders directly on Distributor's host computer 210 for thousands of different customers who call in. In that environment, search program 250, which preferably comprises TV/2 search program 250, and catalog databases 236 are stored on file server 200. In this environment, file server 200 is a large personal computer, a work station or a mini-computer such as an IBM AS/400. Alternatively, the server 200 and a minicomputer (such as an IBM AS/400) can be independently connected to each local computer 200.

Each CSR has a local personal computer 220 having a monitor 222, a keyboard 224 and a printer 226. Local computer 220 is provided with programs including requisition/purchasing program 240, Shell program 252
5 and a graphic user interface 254 (preferably EASEL Workbench program 254 for OS/2) for listing items. One or more of these may be copied from server 220 when needed. Work-in-progress requisitions 260 are established for each customer and are attached to
10 graphic user interface 254. Server 200 maintains complete requisitions 242, in a manner similar to the manner in which local computer 20 maintains requisition databases 42 in the embodiment shown in FIG. 1A.

Normally, in such an environment, the CSR
15 creates Order lists for customers by entering Distributor catalog numbers into graphic user interface 254 and connecting to the Distributor mainframe 210 for price and availability. For this purpose, each local computer is connected to host computer 210 via a
20 phone/dataline and either a gateway or a minicomputer acting as a local host. When a customer asks for products by manufacturer part number or a competitor's catalog number, the CSR has access to cross-reference files, as earlier described, either maintained on the
25 local host or maintained on the Distributor host computer 210.

Appropriate Distributor catalogs and manufacturer catalogs then are consulted, using TV-2 search program 250 and proper selection of Distributor
30 catalogs and of catalogs and bulletins from manufacturers whose products Distributor regularly sells. Catalogs and bulletins are contained in catalog database 236. The resultant lists of products are then transferred by Shell program 252 to a work-in-progress
35 requisition 260, and then entered from graphical user

interface 254 directly onto Distributor's mainframe
computer 210 as orders from the applicable customer to
Distributor. The CSR, knowing which items are
available from which Distributor warehouse and direct-
5 shipping supplier, then may divide the customer's
requested items into multiple orders, so as to assure
that each order is completely filled by a single
shipment. In this regional environment, file server
200 or the minicomputer acting as local host can
10 maintain files of completed requisitions 242 which can
be subsequently used for generating reports for
customers in the region. Reports can be generated
either from such local data or from data periodically
downloaded to the local host from Distributor's host
15 computer 210.

Another environment where the present
invention can be used is in Distributor's purchasing
department. The item lists created in that environment
can include lists of items Distributor does not
20 regularly stock or purchase, but for which particular
customers indicate a requirement to buy. The file
server 200 in that environment contains TV-2 search
program 250, EASEL graphical user interface 254 and
multiple catalog databases 236 containing catalogs
25 similar to the Fairmont and NIST catalogs described
above for the embodiment of FIG. 1A. The Distributor
purchasing employee can receive by phone or via
Distributor's host computer 210 requests for items not
shown on Distributor's host databases either as regular
30 products (type 03) or third party items purchased for
particular customers on a regular basis (type 07
items). Transmitting certain such requirements to the
applicable Distributor purchasing employee can be a
function of the inventory sourcing routines of host

computer, or may be directed by the Distributor CSR interfacing with the customer.

The Distributor purchasing employee can search appropriate catalogs using TV-2 search program 5 250, and can transfer the "Items Selected" to a product list in EASEL interface 254. The resultant list might display, for example, supplier part number, supplier, list price, product and catalog page, with access to other fields such as complete description (up to 500 10 characters). The Distributor purchasing employee can then either forward the information to the CSR, customer end user or customer purchasing employee who requested the item (to confirm that the requirement is being met) or contact the supplier to confirm pricing 15 and availability. Once responses from either or both have been obtained, the Distributor purchasing employee can use the item list in EASEL interface 254 to create one or more of the following purchase orders:

1. an order from the customer to the 20 supplier (an Administrative Purchase);
2. an order from the customer to Distributor (for a type 07 product); and
3. an order from the Distributor to the 25 supplier (usually providing for direct shipment from the supplier to the customer or to a JIT site maintained by Distributor for the customer).

From the foregoing description, it should be apparent that the network arrangements of FIG. 1B can 30 be used to apply the present invention in a variety of contexts. The context will dictate which catalog databases 236 are provided on file server 200: in the regional CSR environment, Distributor's catalogs can be present with a variety of catalogs and bulletins from 35 manufacturers that Distributor regularly represents and

a limited selection of outside suppliers; and in the Distributor purchasing environment, the number of outside supplier catalogs will be increased. The number of client (local) computers 220 and the number
5 and size of catalog databases 236 will help dictate what size file server 200 is required. The operating environment (regional CSR site, on-site CSR, on-site CSR networked with Customer end users and with purchaser personnel or Distributor purchasing site)
10 will also affect the catalog databases 236 included, file server 200 size and requisition/purchasing program 240 used. In some situations (e.g., purchasing) each client computer has an independent copy of requisition/purchasing program 240; in others (e.g.,
15 on-site CSR) a single copy of the requisition/purchasing program 240 is maintained with associated local databases on the server 200. Where the requisition/purchasing program 240 and local databases are maintained on file server 200, the local database
20 is updated after each use for the benefit of subsequent users. For example, in an environment using Fisher RIMS for requisition/purchasing program 240, if a NIST standard is selected using TV-2 search program 250 and ordered using Fisher RIMS 240 (as either a type 07
25 purchase from Distributer or a type 05 administrative purchase from NIST), that item is available in the applicable database for subsequent requisitions. For example, a NIST standard ordered as a type 05 item will be stored in the local database on file server 200,
30 with NIST as the vendor for subsequent administrative purchases by Customer. A NIST standard ordered from Distributor as a type 07 item will be stored in Distributor's host databases as a type 07 available to Distributor from NIST. The local databases on file
35 server 200 will also contain records of all items

requisitioned and ordered, useful to transfer files to a Customer's computer (e.g., of purchase orders placed by that Customer in a day) or to generate reports for a Customer (e.g., or requisitions placed by each Customer
5 department and/or budget number in a week).

Thus it is seen that an electronic sourcing system including means for linking a requisition/purchasing system and a means for searching large volumes of information has been described. Persons
10 skilled in the art will appreciate that the present invention can be practiced by other than the described embodiments, which are presented for the purposes of illustration and not of limitation, and the present invention is limited only by the claims which follow.

APPENDIX I

FISHER SCIENTIFIC RIMS
REQUISITION HEADER

DATE: 08/05/94
TIME: 07:04:57

ACCT-NBR : NAME:
ADDRESS:
COMPANY : :
REQ NBR : :
RELEASE : ORDER TYPE : R ORDER
HOLD/REL: I RUSH CODE: 9
CALLER : FREIGHT OVERRIDE: N TAX OVERRIDE:
EDI PO TO HOST: N POA 855
ATTN : PRT ACK: Y NBR OF COPIES: 1
ACK DELV CODE: P PRINT & DELIVER
BILL TO : REQ DELV CODE: W WALK IN
SERVICE CHARGE: 0.00
VENDOR :
CREATED: 08-04-1994 STATUS: R

RESPONSE: KEY(S):

+F2:ADD F3:EXIT F4:UPDATE F5:REFRESH F6:ITEM F9:VAR F10:SRCE F11:CHGPO F12:DEL
1BV123

APPENDIX II

*** REQUISITION MANAGEMENT SCREEN ***

ACCT NBR: 218848 002 REQ NBR: TEST NEW ONE

S	COMP:	1	REL NBR:																	
	LINE	STOCK NBR	QTY	UM	PT	STKRM	XREF	SPI	UNIT	PRICE	EXT	PRICE								
	001	13246818F	0	CS	03					0.00		0.00								
	DESC:					QTY	AVAIL:	0	LOC:	FSHR	WHSE:	BLW								

002			
DESC:	QTY AVAIL:	LOC:	WHSE:

003 DESC:	QTY AVAIL:	LOC:	WASE:

004			
DESC:	QTY AVAIL:	LOC:	WHSE:

005			
DESC:	QTY AVAIL:	LOC:	WHSE:

RESPONSE: KEY(S):

ALL ITEMS DISPLAYED

F3:EXIT F6:SOURCE F7:BKWD F8:FWD F9:NEW F10:NONCAT F11: CATALOG F12:CNCL

APPENDIX III

ovens

General

- (1106) Fisher Isotemp 800 Series Programmable Ovens
- (1107) Isotemp 700 Series Deluxe Lab Ovens
- (1108) Isotemp 600 Standard Lab Ovens
- (1109) Fisher Isotemp 500 Series Economy Lab Ovens
- (1110) Gravity Convection Ovens
- (1111) Utility Ovens
- (1112) Mechanical Convection Ovens with Electronic Temperature
- (1113) General-Purpose Ovens
- (1114) Heavy Duty Deluxe Ovens
- (1116) Large Capacity Model 2882A
- (1117) Standard Capacity Model 281A
- (1118) Fisher Models 280 and 285 Vacuum Ovens
- (1119) NAPCO Vacuum Ovens

Help Catalogs Search Order List Minimize Clear Prev Next Exit

APPENDIX IV

(FSC1106)Fisher Isotemp 800 Series Programmable Ovens

Fisher Isotempx 800 Series Programmable Ovens

Three linear heat-up and cool-down stages
Talking control panel
Keypad and lighted graphics
30° to 325°C range
RS-422 serial communications capability

The latest technology at your fingertips. Accurate, easy-to-use controls allow you to program up to 3 heat-up stages and 3 cool-down stages linearly to provide the most appropriate conditions for your samples. Using the large keyboard, you can choose the heat-up or cool-down rate, the temperature you want for each stage, and the length of time you want the oven to hold each temperature. And, for projects requiring repeatability, you can duplicate the settings at any time.

Help Catalogs Search Order List Minimize Clear Prev Next Exit

APPENDIX V

(FSC1106) Fisher Isotemp 800 Series Programmable Ovens

Model	818F	838F
Inside D x W x H	16 x 12 x 16 (41 x 30 x 41cm)	18 x 18 x 20 (46 x 46 x 51cm)
Shp. Wt.	156 lb. (71kg)	195 lb. (88kg)
Electrical Requirements	230V 50/60Hz 11.3 Amps	230V 50/60Hz 19 Amps
Cat. No.	13-246-818F	13-246-838F
Each	3495.00	3995.00

Extra Shelves for 800 Series Ovens

No-tip design. Move to any position in seconds. Full Depth Shelves: Chrome-Plated Steel

Help Catalogs Search Order List Minimize Clear Prev Next Exit

APPENDIX VI

ITEMS SELECTED

Part Number	Description	List Price
13246818F	ISOTEMP OVEN MDL818F 230V	3495.00

Help Cancel Delete Delete All Order Description

APPENDIX VII

SEARCH

Page:

Search For:

Part Number: ☐Fisher ☐Vendor ☐Customer

Vendor Name:

Bulletin:

HELP SEARCH CANCEL CLEAR USER DATA EXTENDED
Help Catalogs Search Order List Minimize Clear Prev Next Exit

APPENDIX VIII

RICREQ11 FISHER SCIENTIFIC RIMS DATE: 07-29-94
 REQUISITION MANAGEMENT SCREEN TIME: 14:54:22
ACCT NBR: 363690 006 REQ NBR: PO NBR 001
COMP: 1 REL NBR:
0 LINE STOCK NBR QTY UM PT STKRY XREF SPI UNIT PRICE EXT PRICE
001 A181 1 EA 03 0.00 0.00
DESC: QTY AVAIL: 0 LOC: FSHR WHSE: EDC

002 02540K 1 PK 01 0.00 0.00
DESC: QTY AVAIL: 49 LOC: WHSE: JIT

003 13246818F 1 EA 03 0.00 0.00
DESC: QTY AVAIL: 0 LOC: FSHR WHSE: EDC

004 A181-06 1 EA 06 100.00 100.00
DESC: ACETONE QTY AVAIL: 0 LOC: WHSE: JIT
JIT BACKORDER WILL OCCUR
005
DESC: QTY AVAIL: 0 LOC: WHSE:

RESPONSE: KEYS(S):
I ITEM(S) PROCESSED
+ F3:EXIT F6:SOURCE F7:BKWD F8:FWD F9:NEW ITM F10:NONCAT F11:CATALOG F12:CNCL

1B V123

APPENDIX IX

RICPOMP1

FISHER SCIENTIFIC RIMS
REQUISITION MANAGEMENT SCREEN
REQ-NBR : PO NBR 001
REL-NBR :

DATE: 08-03-94
TIME: 07:44:13

COMP ID: 001
ACCT NBR : 363690 006
ORDER NBR:
SERVICE : 0.00
CARRIER :

PICKLIST REVIEWED :
ORDER: 0.00 FREIGHT:

O LINE	PART	QTY	UOM	PRD	UNIT PRICE	SERVICE EXT	PRICE	LOC	STAT
001	A181	1	EA	03	35.30	0.00	35.30	DEL	S
	ACETONE CERTIFIED ACS		1L	QTY AVAIL:		1	QTY REC:		O
002	02540K	1	PK	01	32.70	0.00	32.70	JIT	S
	BEAKER GRIFFIN 250ML		12/9	QTY AVAIL:		49	QTY REC:		O
003	13246818F	1	EA	03	3495.00	0.00	3495.00	EDC	S
	PROGRAMMABLE OVEN			QTY AVAIL:		0	QTY REC:		O
004	A181-06	1	EA	06	100.00	0.00	100.00	JIT	S
	ACETONE			QTY AVAIL:		0	QTY REC:		O

RESPONSE: KEY(S) :

+ F3:EXIT F6:ACCEPT F7:BKWD F8:FWD F9:PRINT ACK F11:M/B ERRORS F12 DELETE
1B V123

APPENDIX X

*** REQUISITION MANAGEMENT SCREEN ***

ACCT NBR: 218848 002 REQ NBR: TEST NEW ONE
COMP: 001 REL NBR:
ELECTRONIC SOURCING MESSAGES

LINE NUMBER 001 PART NUMBER 53610
PART ADDED SUCCESSFULLY

LINE NUMBER 001 PART NUMBER 53610
REPLACEMENT WAS MADE FOR PRIOR PART: S100-06

LINE NUMBER 001 PART NUMBER 53610
VENDOR CHANGED FROM: VN00000001

LINE NUMBER 002 PART NUMBER 53620
PART ADDED SUCCESSFULLY

LINE NUMBER 003 PART NUMBER 53650
PART ADDED SUCCESSFULLY

F6: RETURN F7: BACKWARD F8: FORWARD

WE CLAIM:

1. An electronic sourcing system comprising:
 - means for maintaining a catalog database of data relating to catalog items from at least two vendor product catalogs;
 - means for entering product information that at least partially describes at least one item desired to be requisitioned;
 - means for searching the catalog database for at least one catalog item from said vendor product catalogs that matches the information for said desired item;
 - means for building a requisition including an entry for said desired item based upon data obtained from said catalog database relating to the matching catalog item, said data identifying at least a vendor and a vendor catalog number for the matching catalog item; and
 - means for processing said requisition to generate a purchase order including an entry for an item corresponding to said matching catalog item.
2. The electronic sourcing system of claim 1, wherein said purchase order entry identifies at least said vendor catalog number for said matching catalog item.
3. The electronic sourcing system of claim 1, wherein said requisition building means includes a means for converting said vendor and vendor catalog number into a corresponding other vendor and other vendor catalog number, and wherein said purchase order entry identifies at least said other vendor catalog number for said matching catalog item.

4. A sourcing system comprising:

means for maintaining a catalog database of data relating to catalog items from at least two vendor product catalogs;

means for entering product information that at least partially describes respective first and second items desired to be requisitioned;

means for searching the catalog database for at least first and second catalog items from said vendor product catalogs, each of said first and second catalog items obtained from a different respective one of said first and second vendor product catalogs and matching the information for a different respective one of said first and second desired items;

means for building a requisition including at least first and second entries each for a different respective one of said first and second desired items and based upon data obtained from said catalog database relating to said respective matching catalog item, said data identifying at least a vendor and a vendor catalog number for said respective matching catalog item; and

means for processing said requisition to generate at least first and second purchase orders, each to a different supplier and each including an entry for an item corresponding to a different one of said first and second matching catalog items.

5. The electronic sourcing system of claim 4, wherein at least said first purchase order identifies at least said vendor and vendor catalog number for said first matching catalog item.

6. The electronic sourcing system of claim 4, wherein said requisition building means includes a means for converting said vendor and vendor catalog number for at least said first matching catalog item into a corresponding other vendor and other vendor catalog number, and wherein at least said first purchase order entry identifies at least said other vendor catalog number for said matching catalog item.

7. The electronic sourcing system of claim 4, wherein said requisition building means includes a means for converting said vendors and vendor catalog numbers for said first and second matching catalog items into corresponding first and second other vendors and first and second other vendor catalog numbers, and wherein the entry of each of said first and second purchase orders respectively identifies at least a different one of said first and second other vendor catalog numbers.

8. An electronic sourcing system comprising:

means for maintaining a catalog database containing data relating to catalog items from at least first and second vendor product catalogs;

means for entering product information that at least partially describes items desired to be requisitioned;

means for searching the catalog database for catalog items from said vendor product catalogs that match the product information for said desired items;

means for generating an order list that includes at least one selected matching catalog item;

means for building a requisition for said desired item using data obtained from said catalog database relating to the matching catalog item on said order list, said data identifying at least the vendor and vendor catalog number for the matching catalog item; and

means for processing said requisition to generate a purchase order including an entry for an item corresponding to said matching catalog item.

9. The electronic sourcing system of claim 8, wherein said purchase order entry identifies at least said vendor catalog number for said matching catalog item.

10. The electronic sourcing system of claim 8, wherein said requisition building means includes a means for converting said vendor and vendor catalog number into a corresponding other vendor and other vendor catalog number, and wherein said purchase order entry identifies at least said other vendor catalog number for said matching catalog item.

11. An electronic sourcing system comprising:

means for maintaining a catalog database containing data relating to catalog items from at least first and second vendor product catalogs;

means for entering product information that at least partially describes items desired to be requisitioned;

means for searching the catalog database for catalog items from said vendor product catalogs that match the product information for said desired items;

means for generating an order list that includes at least two selected matching catalog items, each from a different one of said vendor product catalogs;

means for building a requisition for said desired items using data obtained from said catalog database relating to the matching catalog items, said data identifying at least the vendors and vendor catalog numbers for the matching catalog items; and

means for processing said requisition to generate at least one purchase order including an entry for an item corresponding to at least one of said matching catalog items.

12. The electronic sourcing system of claim 11, wherein said purchase order entry identifies at least said vendor catalog number for said matching catalog item.

13. The electronic sourcing system of claim 11, wherein said requisition building means includes a means for converting said vendor and vendor catalog number into a corresponding other vendor and other vendor catalog number, and wherein said purchase order entry identifies at least said other vendor catalog number for said matching catalog item.

14. An electronic sourcing system comprising:

means for maintaining a catalog database containing data relating to catalog items from at least first and second vendor product catalogs;

means for entering product information that at least partially describes items desired to be requisitioned;

means for searching the catalog database for catalog items from said vendor product catalogs that match the product information for said desired items;

means for generating an order list that includes at least first and second selected matching catalog items, each from a different one of said vendor product catalogs;

means for building a requisition for said desired items using data obtained from said catalog database relating to said matching catalog items, said data identifying at least the vendors and vendor catalog numbers for the matching catalog items; and

means for processing said requisition to generate at least one purchase order including at least first and second entries for items each respectively corresponding to a different one of said first and second matching catalog items.

15. The electronic sourcing system of claim 14, wherein at least said first one of said purchase order entries identifies at least said vendor catalog number for said first matching catalog item.

16. The electronic sourcing system of claim 15, wherein said second one of said purchase order entries identifies at least said vendor catalog number for said second matching catalog item.

17. The electronic sourcing system of claim 14, wherein said requisition building means includes a

means for converting said vendors and vendor catalog numbers into corresponding other vendors and other vendor catalog numbers, and wherein at least one of said purchase order entries identifies at least one of said other vendor catalog numbers for one of said matching catalog item.

18. An electronic sourcing system comprising:

means for maintaining a catalog database containing data relating to catalog items from at least first and second vendor product catalogs;

means for entering product information that at least partially describes items desired to be requisitioned;

means for searching the catalog database for catalog items from said vendor product catalogs that match the product information for said desired items;

means for generating an order list that includes at least two selected matching catalog items, each from a different one of said vendor product catalogs;

means for building a requisition for said desired items using data obtained from said catalog database relating to the matching catalog items, said data identifying at least the vendors and vendor catalog numbers for the matching catalog items; and

means for processing said requisition to generate at least two purchase orders, each including an entry for an item corresponding to a different one of said matching catalog items.

means for searching the catalog database for catalog items from said vendor product catalogs that match the product information for said second desired item, and for selecting a matching catalog item from another one of said catalogs;

means for building a requisition for said desired items using data obtained from said catalog database relating to the selected matching catalog items, said data identifying at least the vendors and vendor catalog numbers for the selected matching catalog items; and

means for processing said requisition to generate a plurality of purchase orders, each including an entry for an item corresponding to a different one of said matching catalog items.

23. The electronic sourcing system of claim 22, wherein said entry for at least one of said purchase orders identifies at least said vendor catalog number for one of said matching catalog items.

24. The electronic sourcing system of claim 22, wherein said requisition building means includes a means for converting said vendors and vendor catalog numbers into corresponding other vendors and other vendor catalog numbers, and wherein said entry for at least one of said two purchase orders identifies at least one of said other vendor catalog numbers for one of said matching catalog items.

25. An electronic sourcing system comprising:

means for maintaining a catalog database containing data relating to catalog items from at least first and second vendor product catalogs;

means for entering product information that at least partially describes a first item desired to be requisitioned;

means for searching the catalog database for catalog items from said vendor product catalogs that match the product information for said first desired item, and for selecting a matching catalog item from one of said catalogs;

means for subsequently entering product information that at least partially describes a second desired item to be requisitioned;

means for searching the catalog database for catalog items from said vendor product catalogs that match the product information for said second desired item, and for selecting a matching catalog item from another one of said catalogs;

means for building a requisition for said desired items using data obtained from said catalog database relating to the selected matching catalog items, said data identifying at least the vendors and vendor catalog numbers for the selected matching catalog items; and

means for processing said requisition to generate at least one purchase order including at least first and second entries for items each respectively corresponding to a different one of said matching catalog items.

26. The electronic sourcing system of claim 25, wherein said requisition building means includes a means for converting said vendors and vendor catalog numbers into corresponding other vendors and other vendor catalog numbers, and wherein at least one of said entries of said purchase order identifies at least

one of said other vendor catalog numbers for one of said matching catalog items.

27. An electronic sourcing system comprising:

means for maintaining a catalog database containing data relating to catalog items from at least first and second vendor product catalogs;

means for entering product information that at least partially describes a first item desired to be requisitioned;

means for searching the catalog database for first catalog items, from at least one of said vendor product catalogs, that match the product information for said first desired item;

means for generating an order list that includes a selected one of said first matching catalog items from said one catalog;

means for subsequently entering product information that at least partially describes a second desired item to be requisitioned;

means for searching the catalog database for second catalog items, from another one of said vendor product catalogs, that match the product information for said second desired item;

means for adding to said order list a selected one of said second matching catalog items from said other one of said catalogs;

means for building a requisition for said desired items using data obtained from said catalog database relating to the selected first and second matching catalog items on said order list, said data identifying at least the vendors and vendor catalog numbers for said matching catalog items; and

means for processing said requisition to generate a plurality of purchase orders, each including an entry for an item corresponding to a different one of said first and second matching catalog items.

28. The electronic sourcing system of claim 27, wherein said entry for at least one of said purchase orders identifies at least said vendor catalog number for one of said matching catalog items.

29. The electronic sourcing system of claim 27, wherein said requisition building means includes a means for converting said vendors and vendor catalog numbers into corresponding other vendors and other vendor catalog numbers, and wherein said entry for at least one of said two purchase orders identifies at least one of said other vendor catalog numbers for one of said matching catalog items.

30. An electronic sourcing system comprising:

means for maintaining a catalog database containing data relating to catalog items from at least first and second vendor product catalogs;

means for entering product information that at least partially describes items desired to be requisitioned;

means for searching the catalog database for catalog items from said vendor product catalogs that match the product information for said desired items;

means for generating an order list that includes at least two selected matching catalog items, each from a different one of said vendor product catalogs;

means for building a requisition for said desired items using data obtained from said catalog database relating to the matching catalog items, said data identifying at least the vendors and vendor catalog numbers for the matching catalog items; and

means for processing said requisition to generate at least two purchase orders, each including an entry for an item corresponding to a different one of said matching catalog items.

31. An electronic sourcing system comprising:

means for maintaining a catalog database containing data including descriptive information relating to catalog items from at least first and second vendor product catalogs;

means for entering product information that at least partially describes an item desired to be requisitioned;

means for searching the catalog database for catalog items from said vendor product catalogs that match the product information for said desired item;

means for generating a hit list of catalog segments identifying items, from at least one of said vendor product catalogs, that match the product information;

means for selectively viewing the catalog segments identified by said hit list;

means for generating an order list of desired items at least one of which is a desired catalog item selected from a catalog segment identified by said hit list;

means for building a requisition for said order list of desired items using, for said desired catalog item, data obtained from said catalog database relating to the desired catalog item, said data identifying at least the vendor and vendor catalog number for the desired catalog item; and

means for processing said requisition to generate at least one purchase order including entries for items corresponding to said desired items, at least one of said entries corresponding to said matching catalog item.

32. The electronic sourcing system of claim 31, wherein said purchase order entry identifies at least said vendor catalog number for said matching catalog item.

33. The electronic sourcing system of claim 31, wherein said requisition building means includes a means for converting said vendor and vendor catalog number into a corresponding other vendor and other vendor catalog number, and wherein said purchase order entry identifies at least said other vendor catalog number for said matching catalog item.

34. An electronic sourcing system comprising:

means for maintaining a catalog database of data relating to catalog items from at least one vendor product catalog;

means for entering product information that at least partially describes at least one item desired to be requisitioned;

means for searching the catalog database for at least one catalog item from said vendor product catalog that matches the information for said desired item;

means for building a requisition including an entry for said desired item based upon data obtained from said catalog database relating to the matching catalog item, said data identifying at least a vendor catalog number for the matching catalog item; and

means for determining that an item corresponding to the desired matching catalog item is available in inventory, and for processing said requisition to generate a purchase order including an entry identifying said inventory item.

35. The electronic sourcing system of claim 34, wherein said purchase order entry identifies said vendor catalog number for said item in inventory.

36. The electronic sourcing system of claim 34, wherein said requisition building means includes a means for converting said vendor and vendor catalog number into a corresponding other vendor and other vendor catalog number, and wherein said purchase order entry identifies said other vendor catalog number for said item in inventory.

37. An electronic sourcing system comprising:

means for maintaining a catalog database of at least two vendor product catalogs;

means for searching the catalog database for catalog items, and for selecting at least one catalog item located as a result of the search;

means for generating a requisition including at least one requisitioned item;

means for communicating said selected catalog item to said requisition generating means; and

means responsive to said requisition for generating a purchase order including an entry corresponding to said selected catalog item.

38. An electronic sourcing system comprising:

means for maintaining a catalog database of at least two vendor product catalogs;

means for searching the catalog database for catalog items and for selecting at least two catalog items located as a result of the search, each of said two catalog items coming from a different one of said vendor product catalogs;

means for generating a requisition including at least two requisitioned items;

means for communicating said selected catalog items to said requisition generating means; and

means responsive to said requisition for generating a purchase order including at least two entries, each for an item corresponding to a different one of said selected matching catalog items.

39. An electronic sourcing system comprising:

a requisition management system capable of generating a requisition for at least one requisitioned item;

a computer maintaining a catalog database including at least two vendor product catalogs;

means for searching the catalog database for at least one desired catalog item;

means for selecting said desired catalog item, and for communicating data representative of said item to said requisition management system;

means associated with said requisition management system and responsive to said communicated data for generating said requisition including an entry corresponding to said desired catalog item;

means associated with said requisition management system for determining the availability in different inventory locations of said requisitioned desired catalog item; and

means responsive to said determining means for issuing a purchase order for said requisitioned desired catalog item from an inventory location including said catalog item.

40. A sourcing method comprising the steps of:

maintaining a catalog database of data relating to catalog items from at least two vendor product catalogs;

entering product information that at least partially describes at least one item desired to be requisitioned;

searching the catalog database for at least one catalog item from said vendor product catalogs that matches the information for said desired item;

building a requisition including an entry for said desired item based upon data obtained from said catalog database relating to the matching catalog item, said data identifying at least a vendor

and a vendor catalog number for the matching catalog item; and

processing said requisition to generate a purchase order including an entry for an item corresponding to said matching catalog item.

41. The sourcing method of claim 40, wherein said purchase order entry identifies at least said vendor catalog number for said matching catalog item.

42. The sourcing method of claim 40, wherein said requisition building step includes converting said vendor and vendor catalog number into a corresponding other vendor and other vendor catalog number, and wherein said purchase order entry identifies at least said other vendor catalog number for said matching catalog item.

43. A sourcing method comprising the steps of:

maintaining a catalog database of data relating to catalog items from at least two vendor product catalogs;

entering product information that at least partially describes respective first and second items desired to be requisitioned;

searching the catalog database for at least first and second catalog items from said vendor product catalogs, each of said first and second catalog items obtained from a different respective one of said first and second vendor product catalogs and matching the information for a different respective one of said first and second desired items;

building a requisition including at least first and second entries each for a different

respective one of said first and second desired items and based upon data obtained from said catalog database relating to said respective matching catalog item, said data identifying at least a vendor and a vendor catalog number for said respective matching catalog item; and

processing said requisition to generate at least first and second purchase orders, each to a different supplier and each including an entry for an item corresponding to a different one of said first and second matching catalog items.

44. The sourcing method of claim 43, wherein at least said first purchase order identifies at least said vendor and vendor catalog number for said first matching catalog item.

45. The sourcing method of claim 43, wherein said requisition building step includes converting said vendor and vendor catalog number for at least said first matching catalog item into a corresponding other vendor and other vendor catalog number, and wherein at least said first purchase order entry identifies at least said other vendor catalog number for said matching catalog item.

46. The sourcing method of claim 43, wherein said requisition building step includes converting said vendors and vendor catalog numbers for said first and second matching catalog items into corresponding first and second other vendors and first and second other vendor catalog numbers, and wherein the entry of each of said first and second purchase orders respectively identifies at least a different one of said first and second other vendor catalog numbers.

47. A sourcing method comprising:
maintaining a catalog database
containing data relating to catalog items from at least
first and second vendor product catalogs;
entering product information that at
least partially describes items desired to be
requisitioned;
searching the catalog database for
catalog items from said vendor product catalogs that
match the product information for said desired items;
generating an order list that includes
at least one selected matching catalog item;
building a requisition for said desired
item using data obtained from said catalog database
relating to the matching catalog item on said order
list, said data identifying at least the vendor and
vendor catalog number for the matching catalog item;
and
processing said requisition to generate
a purchase order including an entry for an item
corresponding to said matching catalog item.

48. The sourcing method of claim 47, wherein
said purchase order entry identifies at least said
vendor catalog number for said matching catalog item.

49. The sourcing method of claim 47, wherein
said requisition building step includes converting said
vendor and vendor catalog number into a corresponding
other vendor and other vendor catalog number, and
wherein said purchase order entry identifies at least
said other vendor catalog number for said matching
catalog item.

50. A sourcing method comprising:

maintaining a catalog database containing data relating to catalog items from at least first and second vendor product catalogs;

entering product information that at least partially describes items desired to be requisitioned;

searching the catalog database for catalog items from said vendor product catalogs that match the product information for said desired items;

generating an order list that includes at least two selected matching catalog items, each from a different one of said vendor product catalogs;

building a requisition for said desired items using data obtained from said catalog database relating to the matching catalog items, said data identifying at least the vendors and vendor catalog numbers for the matching catalog items; and

processing said requisition to generate at least one purchase order including an entry for an item corresponding to at least one of said matching catalog items.

51. The sourcing method of claim 50, wherein said purchase order entry identifies at least said vendor catalog number for said matching catalog item.

52. The sourcing method of claim 50, wherein said requisition building step includes converting said vendor and vendor catalog number into a corresponding other vendor and other vendor catalog number, and wherein said purchase order entry identifies at least said other vendor catalog number for said matching catalog item.

53. A sourcing method comprising the steps of:

maintaining a catalog database containing data relating to catalog items from at least first and second vendor product catalogs;

entering product information that at least partially describes items desired to be requisitioned;

searching the catalog database for catalog items from said vendor product catalogs that match the product information for said desired items;

generating an order list that includes at least first and second selected matching catalog items, each from a different one of said vendor product catalogs;

building a requisition for said desired items using data obtained from said catalog database relating to said matching catalog items, said data identifying at least the vendors and vendor catalog numbers for the matching catalog items; and

processing said requisition to generate at least one purchase order including at least first and second entries for items each respectively corresponding to a different one of said first and second matching catalog items.

54. The sourcing method of claim 53, wherein at least said first one of said purchase order entries identifies at least said vendor catalog number for said first matching catalog item.

55. The sourcing method of claim 54, wherein said second one of said purchase order entries identifies at least said vendor catalog number for said second matching catalog item.

56. The sourcing method of claim 53, wherein said requisition building step includes converting said vendors and vendor catalog numbers into corresponding other vendors and other vendor catalog numbers, and wherein at least one of said purchase order entries identifies at least one of said other vendor catalog numbers for one of said matching catalog items.

57. A sourcing method comprising the steps of:

maintaining a catalog database containing data relating to catalog items from at least first and second vendor product catalogs;

entering product information that at least partially describes items desired to be requisitioned;

searching the catalog database for catalog items from said vendor product catalogs that match the product information for said desired items;

generating an order list that includes at least two selected matching catalog items, each from a different one of said vendor product catalogs;

building a requisition for said desired items using data obtained from said catalog database relating to the matching catalog items, said data identifying at least the vendors and vendor catalog numbers for the matching catalog items; and

processing said requisition to generate at least two purchase orders, each including an entry for an item corresponding to a different one of said matching catalog items.

58. The sourcing method of claim 57, wherein said entry of at least one of said two purchase orders

identifies at least said vendor catalog number for said first matching catalog item.

59. The sourcing method of claim 58, wherein said entry of at least the other of said two purchase orders identifies at least said vendor catalog number for said second catalog item.

60. The sourcing method of claim 57, wherein said requisition building step includes converting said vendors and vendor catalog numbers into corresponding other vendors and other vendor catalog numbers, and wherein at least said entry for at least one of said two purchase orders identifies at least one of said other vendor catalog numbers for one of said matching catalog items.

61. A sourcing method comprising the steps of:

maintaining a catalog database containing data relating to catalog items from at least first and second vendor product catalogs;

entering product information that at least partially describes a first item desired to be requisitioned;

searching the catalog database for catalog items from said vendor product catalogs that match the product information for said first desired item, and for selecting a matching catalog item from one of said catalogs;

subsequently entering product information that at least partially describes a second desired item to be requisitioned;

searching the catalog database for catalog items from said vendor product catalogs that

match the product information for said second desired item, and for selecting a matching catalog item from another one of said catalogs;

building a requisition for said desired items using data obtained from said catalog database relating to the selected matching catalog items, said data identifying at least the vendors and vendor catalog numbers for the selected matching catalog items; and

processing said requisition to generate a plurality of purchase orders, each including an entry for an item corresponding to a different one of said matching catalog items.

62. The sourcing method of claim 61, wherein said entry for at least one of said purchase orders identifies at least said vendor catalog number for one of said matching catalog items.

63. The sourcing method of claim 61, wherein said requisition building step includes converting said vendors and vendor catalog numbers into corresponding other vendors and other vendor catalog numbers, and wherein said entry for at least one of said two purchase orders identifies at least one of said other vendor catalog numbers for one of said matching catalog items.

64. A sourcing method comprising the steps of:

maintaining a catalog database containing data relating to catalog items from at least first and second vendor product catalogs;

entering product information that at least partially describes a first item desired to be requisitioned;

searching the catalog database for catalog items from said vendor product catalogs that match the product information for said first desired item, and for selecting a matching catalog item from one of said catalogs;

subsequently entering product information that at least partially describes a second desired item to be requisitioned;

searching the catalog database for catalog items from said vendor product catalogs that match the product information for said second desired item, and for selecting a matching catalog item from another one of said catalogs;

building a requisition for said desired items using data obtained from said catalog database relating to the selected matching catalog items, said data identifying at least the vendors and vendor catalog numbers for the selected matching catalog items; and

processing said requisition to generate at least one purchase order including at least first and second entries for items each respectively corresponding to a different one of said matching catalog items.

65. The sourcing method claim 64, wherein said requisition building step includes converting said vendors and vendor catalog numbers into corresponding other vendors and other vendor catalog numbers, and wherein at least one of said entries of said purchase order identifies at least one of said other vendor catalog numbers for one of said matching catalog items.

66. A sourcing method comprising the steps of:

maintaining a catalog database containing data relating to catalog items from at least first and second vendor product catalogs;

entering product information that at least partially describes a first item desired to be requisitioned;

searching the catalog database for first catalog items, from at least one of said vendor product catalogs, that match the product information for said first desired item;

generating an order list that includes a selected one of said first matching catalog items from said one catalog;

subsequently entering product information that at least partially describes a second desired item to be requisitioned;

searching the catalog database for second catalog items, from another one of said vendor product catalogs, that match the product information for said second desired item;

adding to said order list a selected one of said second matching catalog items from said other one of said catalogs;

building a requisition for said desired items using data obtained from said catalog database relating to the selected first and second matching catalog items on said order list, said data identifying at least the vendors and vendor catalog numbers for said matching catalog items; and

processing said requisition to generate a plurality of purchase orders, each including an entry

for an item corresponding to a different one of said first and second matching catalog items.

67. The sourcing method of claim 66, wherein said entry for at least one of said purchase orders identifies at least said vendor catalog number for one of said matching catalog items.

68. The sourcing method system of claim 66, wherein said requisition building step includes converting said vendors and vendor catalog numbers into corresponding other vendors and other vendor catalog numbers, and wherein said entry for at least one of said two purchase orders identifies at least one of said other vendor catalog numbers for one of said matching catalog items.

69. An sourcing method comprising the steps of:

maintaining a catalog database containing data relating to catalog items from at least first and second vendor product catalogs;

entering product information that at least partially describes items desired to be requisitioned;

searching the catalog database for catalog items from said vendor product catalogs that match the product information for said desired items;

generating an order list that includes at least two selected matching catalog items, each from a different one of said vendor product catalogs;

building a requisition for said desired items using data obtained from said catalog database relating to the matching catalog items, said data

identifying at least the vendors and vendor catalog numbers for the matching catalog items; and

processing said requisition to generate at least two purchase orders, each including an entry for an item corresponding to a different one of said matching catalog items.

70. A sourcing method comprising the steps of:

maintaining a catalog database containing data including descriptive information relating to catalog items from at least first and second vendor product catalogs;

entering product information that at least partially describes an item desired to be requisitioned;

searching the catalog database for catalog items from said vendor product catalogs that match the product information for said desired item;

generating a hit list of catalog segments identifying items, from at least one of said vendor product catalogs, that match the product information;

selectively viewing the catalog segments identified by said hit list;

generating an order list of desired items at least one of which is a desired catalog item selected from a catalog segment identified by said hit list;

building a requisition for said order list of desired items using, for said desired catalog item, data obtained from said catalog database relating to the desired catalog item, said data identifying at least the vendor and vendor catalog number for the desired catalog item; and

processing said requisition to generate at least one purchase order including entries for items corresponding to said desired items, at least one of said entries corresponding to said matching catalog item.

71. The sourcing method of claim 70, wherein said purchase order entry identifies at least said vendor catalog number for said matching catalog item.

72. The sourcing method of claim 70, wherein said requisition building step includes converting said vendor and vendor catalog number into a corresponding other vendor and other vendor catalog number, and wherein said purchase order entry identifies at least said other vendor catalog number for said matching catalog item.

73. A sourcing method comprising the steps of:

maintaining a catalog database of data relating to catalog items from at least one vendor product catalog;

entering product information that at least partially describes at least one item desired to be requisitioned;

searching the catalog database for at least one catalog item from said vendor product catalog that matches the information for said desired item;

building a requisition including an entry for said desired item based upon data obtained from said catalog database relating to the matching catalog item, said data identifying at least a vendor catalog number for the matching catalog item; and

determining that an item corresponding to the desired matching catalog item is available in inventory, and for processing said requisition to generate a purchase order including an entry identifying said inventory item.

74. The sourcing method of claim 73, wherein said purchase order entry identifies said vendor catalog number for said item in inventory.

75. The sourcing method of claim 73, wherein said requisition building step includes converting said vendor and vendor catalog number into a corresponding other vendor and other vendor catalog number, and wherein said purchase order entry identifies said other vendor catalog number for said item in inventory.

76. A sourcing method comprising the steps of:

- maintaining a catalog database of at least two vendor product catalogs;
- searching the catalog database for catalog items;
- selecting at least one catalog item located as a result of the search;
- generating a requisition including at least said catalog item as one requisitioned item;
- generating, from said requisition, a purchase including an entry corresponding to said selected catalog item.

77. A sourcing method comprising the steps of:

- maintaining a catalog database of at least two vendor product catalogs;

searching the catalog database for catalog items and for selecting at least two catalog items located as a result of the search, each of said two catalog items coming from a different one of said vendor product catalogs;

generating a requisition including at least two requisitioned items;

generating, responsive to said requisition, a purchase order including at least two entries, each for an item corresponding to a different one of said selected matching catalog items.

78. A sourcing method comprising the steps of:

maintaining on a computer a catalog database including at least two vendor product catalogs;

searching said catalog database for at least one desired catalog item;

selecting said desired catalog item;

generating a requisition including an entry corresponding to said desired catalog item;

determining the availability in different inventory locations of said requisitioned desired catalog item; and

responsive to determining that said catalog item is available in at least one of said inventory locations, issuing a purchase order for said requisitioned desired catalog item from that inventory location.

ELECTRONIC SOURCING SYSTEM AND METHOD

ABSTRACT

An electronic sourcing system includes a computer that maintains a catalog database of data including product information (such as product identification and descriptive information) relating to catalog items available from vendor product catalogs, and a means for building (generating) a requisition including at least one requisitioned item. Information at least partially identifying an item desired to be requisitioned is entered by a user, and utilized by a means for searching the database for catalog items matching that information and for selecting at least one catalog item located as a result of the search. Text describing the catalog items, and images of the items, may be viewed. Data identifying selected catalog items are communicated to the requisition building means, which generates a requisition including entries for items corresponding to the selected catalog items. The system checks the availability in one or more inventory locations of the corresponding desired catalog items, and generates one or more purchase orders for desired items from inventory locations stocking the items.

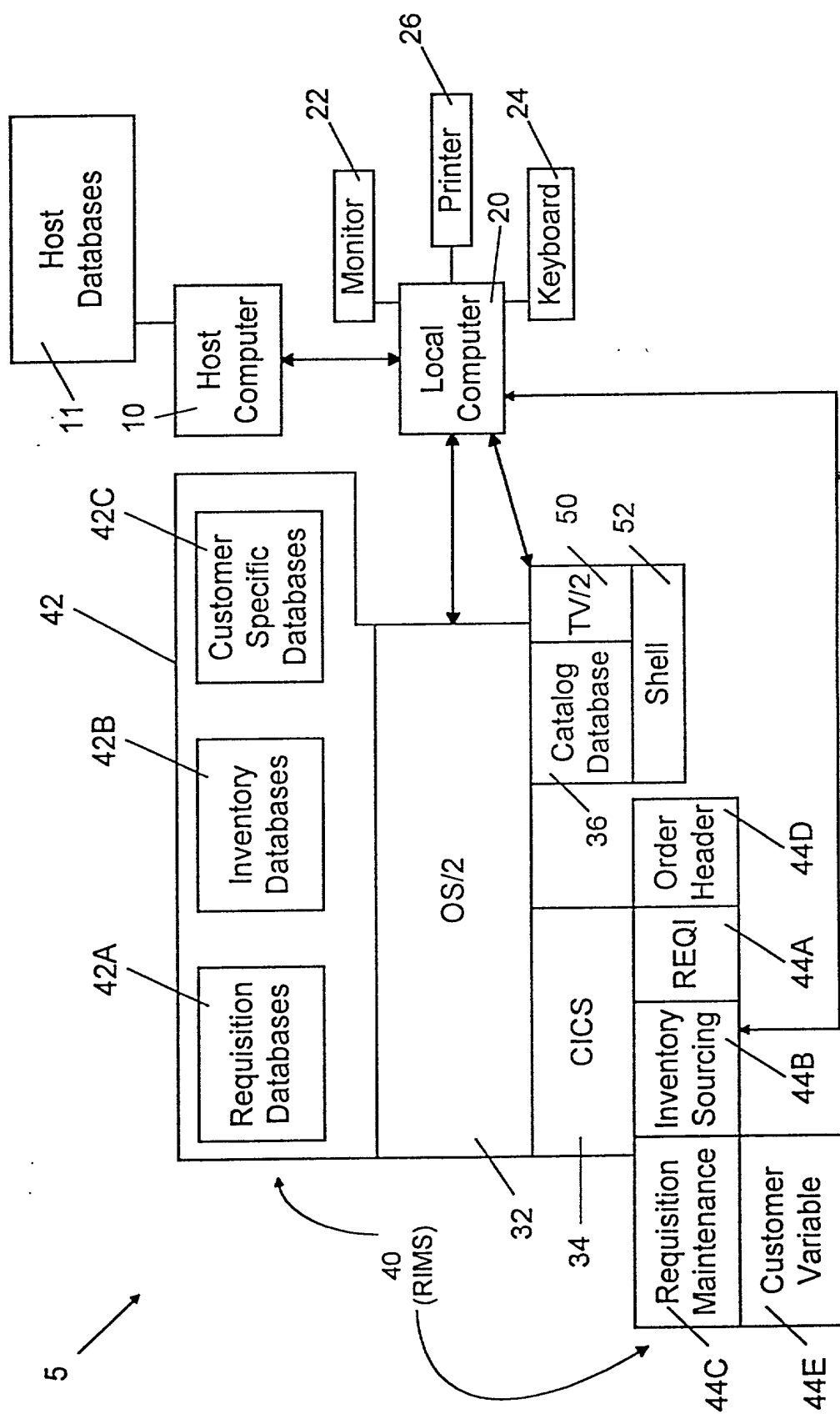


FIG. 1A

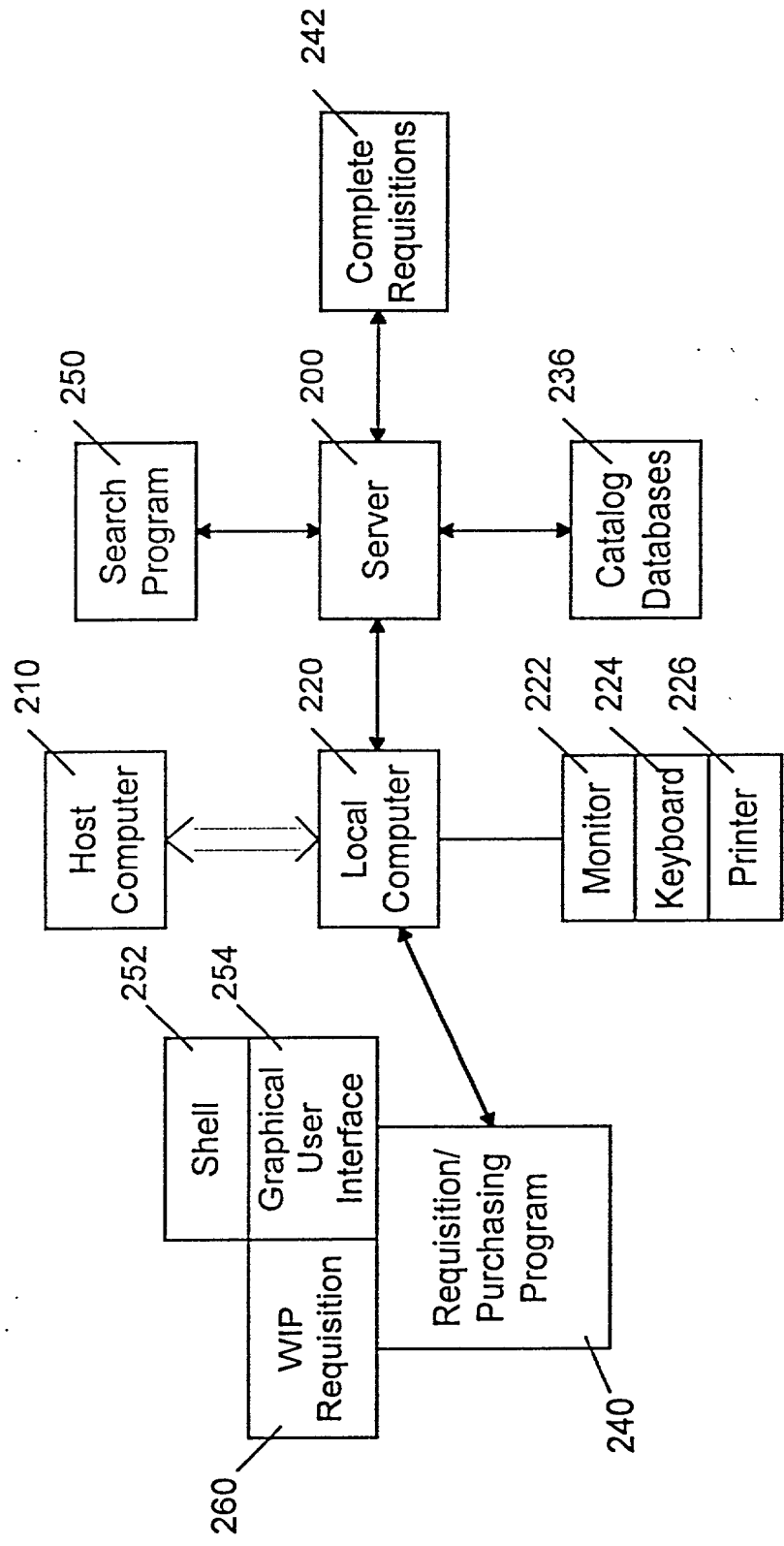


FIG. 1B

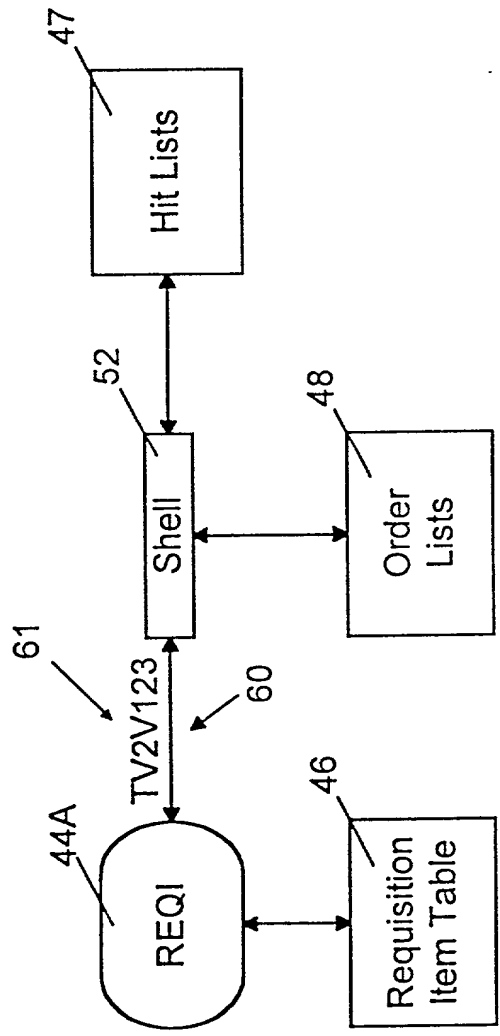


FIG. 1C

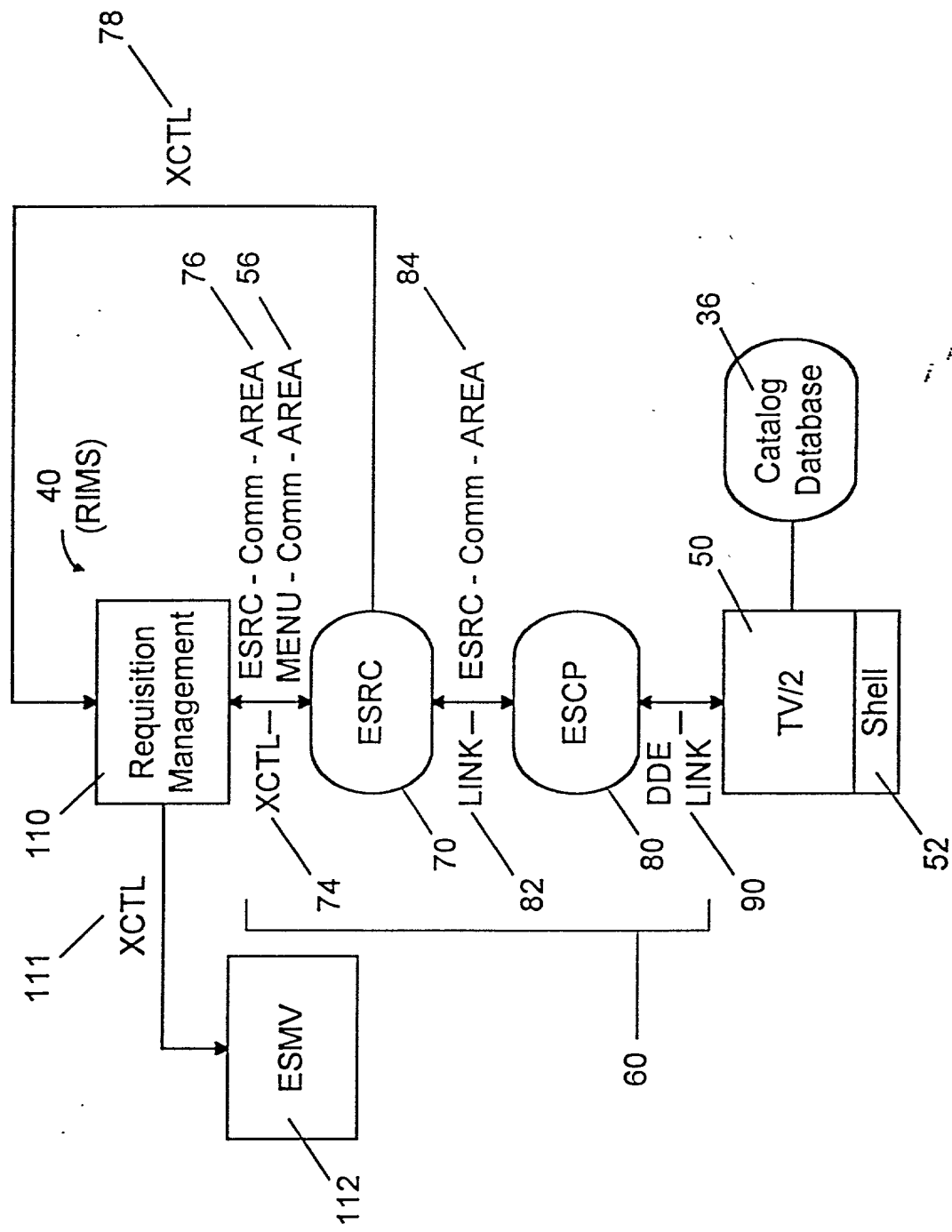


FIG. 2

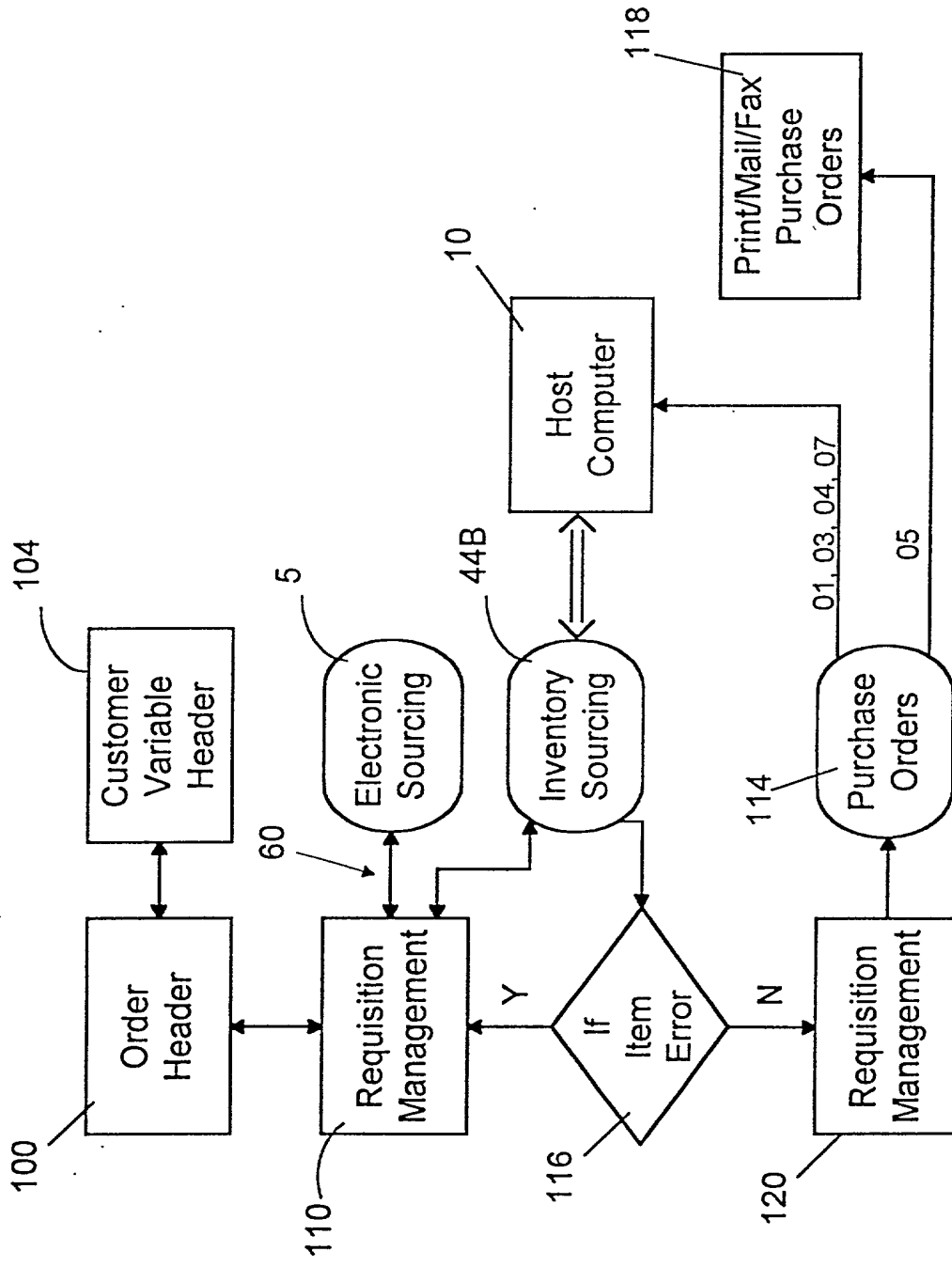


FIG. 3